

CHANGING PATTERNS IN U.S. TRADE AND SHIPPING CAPACITY



**U.S. DEPARTMENT OF COMMERCE
MARITIME ADMINISTRATION**

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Foreword

The evolution and growth of nations and new regional economic units around the world is reflected in the changing patterns of international trade.

Nations newly emergent from colonial status do not necessarily follow the trading patterns of former allegiances. Moreover, their rapid development has produced new markets and sources of supply. The Common Market in Europe and the development of other regional trading areas have had a decided impact on world trade.

The patterns of United States seaborne commerce have changed substantially, not only since the end of World War II, but in the past decade alone. During the last ten years the volume of its oceanborne exports and imports has doubled, and in the next ten years it is expected to increase by half as much again. This increase has been accompanied by changes in the composition and direction of United States international trade. The dynamic process of constant adjustment to changing conditions will continue, for it is the basis of our success as a trading nation.

The role of the American merchant marine in this process of adjustment has been a central one; efficient transportation requires subtle adjustments to the myriad needs of each trade.

In meeting this challenge, the shipping industry is confronted with the fundamental truth that its mission is simply to move cargo from one point on the earth to another. There is great danger in remaining tied to traditional notions of the immutable nature of the business of ocean shipping.

This basic truth has had relevance for almost all of the programs of the Maritime Administration, as well as for the maritime industry. The goal of federal research and development efforts in this area for example, is not simply to design a better ship, but to seek a better, more economic way of moving cargo from point of origin to destination.

Indeed, the distinguished first Maritime Administrator, Joseph P. Kennedy, set an imaginative example for all who followed him when he wrote in 1937, "... there are many cogent reasons why a progressive shipping company might well add flying boats to its cabin liners and its freighters." *Aircraft and the Merchant Marine*, p. 20 (1937).

He did not fear to dream, and therefore could warn that,

"It would appear therefore that these services (one-day to Europe by airplane and a 2 1/2 days by dirigible) may, in the near future, be operated at a cost, and with a fare equal to, or possibly less than that of a superliner. Such faster service, with ample capacity for a large part of the passenger, mail and express traffic will cause superliner service to lose much of its appeal and justification for a large class of traffic." (p. 19)

"For shipping companies not to make use of this new vessel on their trade routes may prove quite short-sighted." (p. 21)

In evaluating this prediction, it is not insignificant that last year ten percent of the cargo, by value, moving out of New York City went by air. This growing challenge is one to which the shipping industry cannot respond in traditional ways. The creation of a more adequate and economic merchant marine will require the courage and imagination which has characterized the great moments in the history of this industry.

Basic information like that contained in this document is essential if we are to devise plans to meet this challenge, with its attendant consequences for our export promotion program, national defense, agricultural exports, foreign relations, and the domestic economy, including job opportunities. In the following pages will be found analyses of the changes in United States oceanborne trade, the ships that carry our exports and imports, and some of the changes we may expect to see take place during the coming years. The report contains a wealth of information which should benefit all who have an interest in United States foreign commerce. It was prepared by Irwin M. Heine, Chief, and Muriel W. Coe, Foreign Shipping Analyst, Office of Statistics. Russell M. Brown, Division of Management, designed the charts.

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Changing Patterns in U.S. Trade and Shipping Capacity

Introduction

It is estimated that the waterborne foreign commerce of the United States contributes somewhat more than 12 percent to the world's seaborne cargo tonnage movement.¹

Divergent economic and social forces throughout the world influenced the volume and direction of United States foreign trade in 1963. Foreign aid granted by this country to a number of nations whose economies are in formative stages, or which sustained food or other shortages affecting their social structures, resulted in shipments to such countries of over 21 million long tons of agricultural and industrial products. On the other hand, a number of similar commodities comprising bulk and general cargoes were shipped in increasing quantities to countries enjoying high industrial activity. Payment methods, however, differed considerably as between the two groups.²

Over the 10-year period 1953-62, the annual average growth rate of our country's oceanborne commercial foreign trade was 8.2 percent³ compared with 7.1 percent⁴ for total world seaborne commerce. Yet, in contrast to the continuing upward trend in the volume of our overseas trade, U.S. flag ships were carrying a decreasing share of the total. (See Table 1.)

Much has been said about the part played by a number of ships registered under Panamanian, Honduran and Liberian flags which are considered by the Navy Department to be under the effective control of the United States. For the first time since 1960, a detailed analysis of the types of ships, their size, age and the cargoes they carried has been made. The results are included in Part II of this study.

Part I.—U.S. Flag and Foreign Flag Ships of All Registries

The participation of U.S. flag ships in our country's foreign trade is in sharp contrast to that of other national flag fleets in their respective overseas trades. For example, listed below are ten of the maritime trading nations which possess substantial merchant fleets. Although none of these nations approaches the volume of foreign trade enjoyed by the United States, each is dependent upon its merchant fleet for a contribution to its national economy. It will be noted that of the ten countries listed, only two of their fleets carried less than 25 percent of their overseas trade. The remainder carry from one-third to three-fifths.

Country	Percent participation in National Trade	Latest Year Available
UNITED STATES.....	8.5	1963
Denmark.....	23.0	1963
France.....	58.7	1962
Germany, West.....	37.0	1962
Greece.....	46.6	1963
Italy.....	32.6	1962
Japan.....	46.2	1962
Netherlands.....	16.0	1963
Norway*.....	42.7	1962
Sweden.....	33.4	1963
United Kingdom**..	52.0	1962

*Excluding export shipments of Swedish ore via the port of Narvik.

**Net registered tonnage of vessels with cargo. Data based on cargo tons carried are not available from official or other sources. It is believed, however, that while the percentage shown for British flag ships is not directly comparable, it is indicative of the extent to which they participate in the country's overseas trade.

Source: Latest data available from foreign maritime representatives and foreign government statistics.

³Maritime Administration, Office of Statistics.

¹United Nations, Statistical Yearbooks 1959-63.

²Payment for agricultural and other commodity exports moving through regular commercial channels is made either in dollars or other freely convertible hard currencies. These receipts are an important factor in the United States balance of payments. On the other hand, a nation may be given a grant of United States Government-sponsored cargoes which requires no repayment, while other countries may pay for such cargoes in local currencies that are not always freely transferable and which may be earmarked for special uses either by the United States or the recipient country. To an increasing degree, loans made by the Agency for International Development (AID) now call for repayment in dollars on special terms such as low interest rates, longer periods of repayment and other concessions.

It may also be interesting to note the following comparison of the merchant fleets of the world as compared with the U.S. merchant fleet for the last ten years. In this connection it should be borne

in mind that in those years more than half of the tonnage of the U.S. fleet has been inactive in the reserve fleet. This condition still prevails.

A Comparison of the United States and World Merchant Fleet for the Years 1954-63, as of December 31

(000 gross tons)					
1	2	3	4	5	6
Year	Total world	U.S. privately owned	Percent of world (3 ÷ 2)	U.S. privately and Government owned	Percent of world (5 ÷ 2)
1963.....	137,657	10,076	7.3	22,520	16.4
1962.....	132,064	9,982	7.6	22,883	17.3
1961.....	125,851	9,616	7.6	22,580	17.9
1960.....	122,027	9,610	7.9	23,754	19.5
1959.....	117,640	9,519	8.1	24,036	20.4
1958.....	112,314	9,213	8.2	24,247	21.6
1957.....	104,770	8,982	8.6	23,725	22.6
1956.....	97,665	9,189	9.4	24,013	24.6
1955.....	92,944	9,177	9.9	25,250	27.2
1954.....	89,258	9,645	10.8	25,483	28.5

Source: Maritime Administration, Office of Statistics.

COMPOSITION OF UNITED STATES OCEANBORNE FOREIGN TRADE

(a) Liner Service⁴

Cargoes carried by freighters in liner service constituted a relatively stable volume of tonnage in United States overseas trade. During the five-year period 1959-63, liner tonnage carried by ships of all flags ranged from a low of 46.2 million tons in 1959 to a high of 48.3 million tons in 1960. In 1963 liner cargoes totaled 47.2 million tons. (See Table 3.) Of the latter amount, 36.2 million tons consisted of general cargo, a producer of higher revenues, and 11 million tons of bulk commodities.

(1) *In the export trade* freighters in liner service carried 20.6 million tons of general cargo and 8.8 million tons of bulk commodities consisting of, among others, 3.3 million tons of agricultural products, over 2 million tons of coal (most of which went to Japan), more than one million tons of phosphate rock, about one-half million tons of sulphur, and one-quarter million tons of lubricating oils and greases.

U.S. flag ships carried 9.2 million tons, or over 31 percent of the 29.4 million tons of liner cargoes which moved by ships of all flags. They carried 3.4 times as much general cargo as bulk outbound, compared with the cargo mix of foreign flag ships whose general to bulk cargoes ratio was 2 to 1.

(2) *Inbound shipments* on ships of all flags totaled almost 18 million tons. General cargoes accounted for 15.6 million tons and bulk cargoes for 2.2 million tons. The latter group consisted principally of 500,000 tons of sugar, some 400,000 tons of manganese and chrome ores, lesser volumes of copra, residual fuel oils, iron ore, and other products. It will be noted that whereas general exceeded bulk cargoes by 2.3 to 1 in the export trade of the United States, the ratio was 7 to 1 for imports.

U.S. flag ships carried 4.6 million tons, or about 26 percent of the total imports which amounted to 17.8 million tons. Of the 4.6 million tons, 631,000 tons were bulk cargoes consisting largely of manganese and chrome ores, inedible molasses and sugar, among other items. The ratio of general to bulk cargoes, however, was 6.3 to 1, indicating that U.S. flag ships carried relatively more bulk commodities in liner service inbound than foreign flag ships.

(b) Irregular Service⁵

The 139.5 million tons of cargo carried by ships of all flags in irregular service were the largest for any service on record. (See Table 4.) Car-

⁴Liner (berth) service is a scheduled operation by a common carrier whose ships operate on a predetermined and fixed itinerary over a given route, at relatively regular intervals, and are advertised considerably before sailing in order to solicit cargo from the public.

⁵Irregular service is comprised of "tramp" and other types of service which do not conform to the criteria described for a common carrier in "liner" service. A "tramp" ship in traditional terms is one that operates on an irregular or unscheduled basis from one port of lading to one port of discharge, lifting one dry cargo commodity, usually of low value, without mark or count, and from one shipper to one consignee. The "tramp" operator does not usually hold himself out as a common carrier and his ship is free to travel anywhere on any terms, not infrequently being chartered out on "time" terms.

goes moved by tramp ships and industrial carriers are increasing steadily in volume. For example, the 139.5 million tons that moved in United States foreign trade in 1963 exceeded the 1962 tonnage volume by 15 million tons; the annual average for the five-year period 1958-62 by 30 million tons; and the annual average for the decade 1953-62 by almost 43 million tons. During the past two years, ships in irregular service carried more cargo tonnage than tankers.

In large measure the increases noted above resulted from (a) exports of Government-sponsored cargoes to many areas throughout the world; (b) increased cash sales shipments of agricultural commodities and industrial products to nations with high level operating economies (e.g., Japan, West Germany, Holland, etc.); (c) imports of

strategic materials under Title III of Public Law 480;⁶ and, among others, (d) the increasing quantities of foreign raw and semi-finished materials and ores required to replace depleting resources in the United States and to meet the rising production demands of our expanding economy.

Without the Government-sponsored aid cargoes, it is doubtful if the U.S. flag tramp fleet could survive. Nor would many U.S. flag tankers find even the limited employment in foreign trade which they now enjoy were it not for the Government-financed grain cargoes moving from the United States. The importance of aid cargoes in sustaining the operations of U.S. flag ships operating in liner, irregular and tanker services is shown by the following table:

Contribution of Government-Sponsored Cargoes* to U.S. Foreign Trade in 1963, Showing Participation by U.S. Flag Ships by Type of Service

(Thousands of long tons)

Type of Service	Total commercial (including Government-sponsored cargoes)			Total Government-sponsored cargoes (Est.)		
	All flags (tons)	U.S. flag (tons)	U.S. flag (percent)	All flags (tons)	U.S. flag (tons)	U.S. flag (percent)
Total Exports and Imports...	<u>312,732</u>	<u>26,625</u>	<u>8.5</u>	<u>21,234</u>	<u>12,191</u>	<u>57.4</u>
Liner.....	47,217	13,798	29.2	7,044	4,866	69.1
Irregular.....	139,489	7,256	5.2	10,205	4,595	45.0
Tanker.....	126,026	5,571	4.4	3,985	2,730	68.5
Total Exports.....	<u>121,670</u>	<u>17,063</u>	<u>14.0</u>	<u>20,086</u>	<u>11,607</u>	<u>57.8</u>
Liner.....	29,447	9,231	31.3	6,960	4,807	69.1
Irregular.....	78,335	4,842	6.2	9,141	4,070	44.5
Tanker.....	13,888	2,990	21.5	3,985	2,730	68.5
Total Imports.....	<u>191,062</u>	<u>9,562</u>	<u>5.0</u>	<u>1,148</u>	<u>584</u>	<u>50.9</u>
Liner.....	17,770	4,567	25.7	84	59	70.2
Irregular.....	61,154	2,414	3.9	1,064	525	49.3
Tanker.....	112,138	2,581	2.3	.....	.....	.....

*Government-sponsored cargoes represent movements for the account of the Department of Agriculture, Agency for International Development (AID), Bureau of Public Roads, and General Services Administration. Tonnage movements initiated by Export-Import Bank loans are not available and would presumably appear in both liner and tramp commercial carryings.

Source: Maritime Administration, Office of Statistics and Division of Operating Agreements and Traffic.

Based upon projections of some of the principal bulk commodities for the period 1965-75, it is estimated that the volume of tonnage moving in the irregular service of United States overseas trade will increase sharply. The 13 commodities or commodity groups used as a basis for the projections are representative of the *dry bulk commodities* which are presently moving in large tonnage volumes and, it is believed, will continue to be representative of commodity movements during the next decade. (See Charts 7-19).

Not all of the cargo carried by ships in irregular service was of bulk type. Of the 139.5 million

tons, almost 12 million tons consisted of general cargo items such as automobiles, finished steel products, machinery, lumber, and paperboard.

U.S. flag tramp ships and industrial carriers carried 7.2 million tons of cargo, or 5 percent of the 139.5 million tons which moved in irregular

⁶Public Law 480, which was passed by the 2d Session of the 83rd Congress on July 10, 1954, and subsequently amended, provides for the overseas shipment of surplus U.S. agricultural commodities under four titles: Title III—Barter and Donations (a) Bartering of surplus commodities (grain) for strategic ores and minerals for U.S. stockpiling program. (Title III, Sec. 302.2)

Principal Dry Bulk Commodities* Exported and Imported in U.S. Oceanborne Foreign Trade, Actual Tonnages for 1955, 1960, 1963, and Projections for 1965 Through 1975

(In millions of long tons)

	Total	Exports	Imports
1955.....	86.1	50.4	35.7
1960.....	110.0	58.2	51.8
1963.....	124.1	75.1	49.0
1965.....	152.6	88.6	64.0
1970.....	191.1	113.2	77.9
1975.....	215.6	123.7	91.9

*Commodities exported

Coal
Corn
Cotton (unmfgd.)
Grain sorghum
Scrap iron and steel
Small grains⁷
Soybeans
Wheat and grain equivalents of flour

Commodities imported

Bauxite
Chromite
Iron ore
Manganese
Sugar

Sources: Maritime Administration, Office of Statistics; Grateful acknowledgement is made for the cooperation and assistance given by commodity specialists in the Department of Agriculture; the Department of the Interior, Bureau of Mines; and the Institute of Iron and Steel Scrap.

service. About 900,000 tons of the 7.2 million tons consisted of general cargo items.

(1) *Export shipments* carried in irregular service by ships of all flags totaled 78.3 million tons, of which more than 73 million tons consisted of bulk commodities such as 29 million tons of agricultural products, over 32 million tons of coal and coke, almost 3 million tons of phosphate rock, about 4.5 million tons of iron and steel scrap, and more than one million tons each of iron ore and sulphur. Numerous other commodities which moved in lesser quantities totaled 2.2 million tons.

U.S. flag ships carried 4.8 million tons, or 6 percent of the total irregular outbound movements. Of this amount, 500,000 tons were classified as general cargo. Slightly more than 4 million tons of the 4.8 million tons consisted of Government-sponsored cargoes, while the remainder moved as a result of regular commercial transactions, primarily to European areas and the Far East.

(2) *Imports* carried by tramp ships and industrial carriers amounted to slightly more than 61 million tons of cargo. Of that total, 54 million tons were bulk cargoes, about 51 million tons of which consisted of iron ore, bauxite, gypsum, sugar, manganese, chromite, and copra.

U.S. flag ships carried only 2.4 million tons, or 4 percent of the total import cargoes. Of the foregoing amount, 525,000 tons consisted of strategic materials imported under the bartering provisions of Public Law 480—Title III. Of the

2.4 million tons, about 2 million tons consisted of five commodities: viz., iron ore, bauxite, manganese, chromite, and sugar. The remainder was general cargo type imports.

(c) Tanker Service

Cargoes carried by tankers of all flags in United States foreign commerce have steadily increased since the end of World War II, despite the dampening effect of import quotas on petroleum products first imposed in March and April 1959. In 1963, tanker cargoes totaled 126 million tons (see Table 5), about 6 million tons more than in the preceding year, and 13 million tons above the annual average of the last five years. In no other year⁷ had the volume been so large. However, projections⁸ for the imports of petroleum products indicate that the tonnage carried by tankers in 1963 may be exceeded by at least 40 million tons by 1975. (See Chart 20.)

(1) *Tanker exports from the United States totaled 13.9 million tons in 1963.* An important factor in this service was the increasing use of tankers to carry dry bulk cargoes. In addition to the 6.8 million tons of petroleum products, *tankers carried 5.3 million tons of agricultural products*, 1.6 million tons of chemicals, and 200,000 tons of miscellaneous cargoes.

U.S. flag tankers carried 3 million tons of cargo, or 20 percent of total tanker exports. Instead of the traditional bulk liquid cargoes, however, most of the cargo consisted of 2.2 million tons of agricultural commodities, 2 million tons of which were wheat. This movement has been a sustaining influence in helping to keep even a minimum number of U.S. flag tankers operating in foreign trade.

(2) *Imports carried by tankers* totaled 112 million tons, of which 109 million tons were petroleum products consisting of 62 million tons of crude petroleum, 40 million tons of residual fuel oil, and over 7 million tons of other petroleum products. The remainder was made up of 1.3 million tons of molasses and 1.8 million tons of chemicals and other liquid bulk commodities.

U.S. flag tankers carried inbound 2.6 million tons, or 2.3 percent of the total. With the exception of 26,000 tons of molasses and chemicals, the remainder consisted of crude oil, residual fuel oil and other petroleum products.

PARTICIPATION BY VARIOUS FLAG SHIPS IN U.S. FOREIGN TRADE

The question as to which flags carry the bulk of United States oceanborne commercial foreign com-

⁷Data showing tonnage volumes on a continuing basis were begun by the U.S. Shipping Board in 1921. In that year, tankers of all flags carried a total of 23,342,000 long tons of cargo.

⁸Based upon data estimated by the Office of Oil and Gas, Department of the Interior.

merce is answered by the data in Table 2. This table also shows the importance of ships under Panamanian, Honduran, and Liberian flags in United States overseas trade. It must be pointed out, however, that not all of the ships under "PanHonLib" flags are under effective United States control. The differences between these two categories will be discussed in another section of this study.

By far the greatest tonnage in United States foreign trade in 1963 was carried by Liberian flag ships (primarily dry and liquid bulk cargoes), and exceeded the volume carried by Norwegian and U.S. flag ships combined. Ships registered in Panama and Liberia together carried more than 32 percent of total United States foreign trade on a volume basis.

The second largest volume of United States trade was carried by Norwegian flag ships, more than twice that carried by U.S. flag ships. Norwegian flag ships carried a substantial amount of cargo in liner, irregular, and tanker services, amounting to 54 million tons, or 17.3 percent of total U.S. foreign trade.

Cargo tonnages carried by U.S. flag ships ranked third in volume. Liner cargoes comprised the greater part of the total and were larger in this service than the tonnage volume carried by any other flag. In large measure, the predominant position of liner cargoes carried by U.S. flag ships is due to: (a) the operating differential subsidies granted by the Government to operators of some 318 U.S. flag ships in foreign trade, (b) the comparability of commodity rates charged by foreign flag liners which belong to the same shipping conferences, since freight rates are presumably the same for all conference members, and (c) the availability of Government-sponsored cargoes which must be shipped in accordance with the provisions of Public Law 664.⁹

Although Japanese flag ships were only in ninth place in the carriage of total U.S. overseas commerce, they were surpassed only by Norwegian and United States flag ships in the carriage of liner cargoes. Strangely enough, most of the cargo carried by Japanese flag ships outbound in liner service from the United States consisted of coal. Japanese flag ships carried 9.7 million tons of all kinds of cargo in the total foreign trade of the United States, of which 9.1 million tons was in trade between Japan and the United States.

Despite the fact that Canada had only 61 ships of 241,000 gross tons, and Mexico 39 ships of 239,000 gross tons in the oceangoing trades of their respective countries, they appear in Table 2 as important carriers of cargo in United States foreign trade. The Canadian ships moved agricultural commodities from United States Great Lakes ports to Canadian ports above Quebec on the lower St. Lawrence River, while Mexican flag ships carried petroleum products principally between Mexican, Californian and U.S. Gulf ports.

Tables 3 through 6 show the extent to which ships of the 18 principal maritime trading nations¹⁰ participated in oceanborne trade between the United States and those nations, as well as the part played by the so-called "PanHonLib" ships.

The type of service involved is important to the extent national flag ships are utilized in United States overseas trade. For example, some national tanker fleets may be used to better advantage in trades other than with the United States. As a result, tankers of United States or third country registry would appear advantageously in trade with a given country (India, Greece, Spain) although the tonnage carried may be relatively small. (See Table 5.)

However, the competition in liner service (see Table 3) is very keen due to the movement of higher-revenue-producing cargoes. Although rates for specified commodities are presumably equal, U.S. flag ships carried considerably less than national flag ships in liner service between their countries and the United States. The degree of competition for this trade is seen in the disparity in the relative amounts of tonnage carried by U.S. flag ships and national flag ships in trade with the following countries:

<u>Trading partner</u>	<u>Percent carried by U.S. flag ships</u>	<u>Percent carried by national flag ships</u>
Denmark.....	12	38
West Germany.....	16	33
Italy.....	20	41
Japan.....	13	68
Netherlands.....	13	30
Norway.....	5	90
Sweden.....	4	80
United Kingdom.....	26	41

⁹This law provides that at least 50 percent of the tonnage of Government-sponsored cargo transported on ocean vessels shall be carried on privately-owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates.

¹⁰These are the 18 countries having the largest fleets of merchant ships of 1,000 gross tons and over, excluding Panama and Liberia which are not considered principal trading nations, and the U.S.S.R., Poland and Communist China for which reliable data are not available.

Part II.—Panamanian, Honduran, and Liberian Flag Ships Under the Effective Control of the United States

Certain misconceptions still persist concerning the part played by ships registered under Panamanian, Honduran and Liberian (PanHonLib) flags in the foreign trade of the United States, viz.:

(1) That *all* PanHonLib ships are under the effective control of the United States,

(2) That *all* effective U.S. controlled (E.U.S.C.) ships operate in the foreign trade of the United States.

As a matter of fact:

(1) Less than 30 percent of the total PanHonLib fleets and 46 percent of their total deadweight tonnage are deemed by the Navy to be under effective United States control.¹¹ The remainder is believed to be foreign owned or controlled and is not susceptible to United States direction.

(2) There were 463 *different* ships of 12.6 million deadweight tons that were, at one time or another, during 1963, deemed by the Navy to have been under effective United States control. Some of the ships may have been under effective control for a matter of days or weeks, others for months or the entire year. Some may have been transferred to other registries, others may have been lost or converted to non-merchant types, such as barges. One Liberian flag ship was redocumented under U.S. flag.

(3) Of the 463 ships, only 313 made one or more sailings to or from the United States during the year. The other 150 ships were operated in other areas of the world or were laid up.

(4) The 313 ships¹² carried 60.8 million long tons of bulk dry and liquid cargoes and 42,460 tons of general cargo, or a total of *19.4 percent* of the 313 million tons moved by ships of *all* flags in United States foreign trade.

(5) This compares with the 63.7 million tons of bulk dry, liquid and general cargoes carried by 353 E.U.S.C. ships in 1960, which comprised *23.3 percent* of the total United States oceanborne foreign trade in that year.

(6) There has been a steady decrease since 1960 in: (a) the number of ships under effective United States control; (b) the number, although not the deadweight tonnage, of E.U.S.C. ships that were engaged in United States foreign trade;

(c) the cargo tonnage volume the E.U.S.C. ships carried in United States export and import trade; and (d) the percentage of the cargo tonnages carried by E.U.S.C. ships in total United States overseas commerce.

TYPES OF E.U.S.C. SHIPS

The following two tabulations show the age and size distributions for each of the major four types of E.U.S.C. ships in 1963. An analysis of their data indicates that: (a) more than half of the tankers and bulk carriers that operated in United States trade were less than ten years old,¹³ pointing up the fact that they were built following the Suez Crisis principally in foreign shipyards; (b) the trend toward larger size tankers and bulk carriers is manifest since more than half of the E.U.S.C. tankers which operated in United States foreign trade ranged from 30,000 to over 90,000 deadweight tons while about one-third of the bulk carriers were 30,000 deadweight tons and over;¹⁴ (c) only a few of the E.U.S.C. tankers were built prior to and during World War II, especially those which operated in trade with the United States; and (d) two-thirds of the freighters were Liberty types, built during World War II, and almost three-quarters of all the E.U.S.C. freighters were 20 years or older and approaching obsolescence.

CARGO TONNAGE CARRIED BY E.U.S.C. SHIPS

The extent to which cargo tonnages carried by E.U.S.C. ships contributed to the overall oceanborne foreign trade of the United States in 1963 is indicated in Table 8.

Of the 60.8 million long tons of cargo that were carried inbound and outbound by the 313 E.U.S.C. ships in 1963, 40.7 million tons were carried by tankers and 20.1 million tons by freighters and bulk carriers. Combination passenger-cargo ships operating primarily in cruise service carried very little cargo.

Imports accounted for 56.1 million tons or 92 percent of the total cargoes carried and consisted principally of petroleum products, iron ore, bauxite, sugar, bananas and other agricultural and mineral products.

¹¹On December 31, 1963, there were 1,507 merchant ships of 1,000 gross tons and over with a total deadweight of 26.9 million tons, comprising the entire Panamanian, Honduran and Liberian fleets. Of that number 443 ships of 12.3 million deadweight tons were deemed by the Military Sea Transportation Service of the Navy Department to have been under effective United States control on that date.

¹²All PanHonLib flag ships, including those under effective control carried 102 million long tons of cargo or about 33 percent of the total United States oceanborne trade in 1963.

¹³Of the 297 tankers and 63 bulk carriers in the U.S. flag privately-owned fleet on December 31, 1963, 84 tankers or 28 percent and one bulk carrier were less than ten years old. The average age of all the 297 tankers was 14.6 years and for bulk carriers 18.6 years.

¹⁴There were 69 tankers (23 percent of the 297 U.S. flag tankers) that were 30,000 deadweight tons or larger on December 31, 1963. There were no U.S. flag bulk carriers that came within those size groups. The great majority of the U.S. flag privately-owned bulk carriers were converted from other types.

Distribution of E.U.S.C. Ships by Deadweight Tonnage Groups During 1963

(a) In U.S. Trade
(b) Not in U.S. Trade

Deadweight tonnage groups	Number of tankers		Number of Freighters		Number of bulk carriers		Number of combination pass./cargo	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Under 6,000.....	3	12	13	2	0	0	4	0
6,000 to 9,999.....	0	5	0	3	5	0	2	0
10,000 to 10,999.....	1	0	40	27	2	0	0	0
11,000 to 15,999.....	4	6	7	1	17	4	0	0
16,000 to 16,999.....	15	30	0	0	2	0	0	0
17,000 to 19,999.....	11	7	0	0	5	0	0	0
20,000 to 29,999.....	45	6	0	0	9	0	0	0
30,000 to 39,999.....	33	10	0	0	9	2	0	0
40,000 to 49,999.....	48	21	0	0	12	1	0	0
50,000 to 59,999.....	7	0	0	0	4	2	0	0
60,000 to 74,999.....	7	1	0	0	5	2	0	0
75,000 to 84,999.....	1	0	0	0	0	0	0	0
85,000 to 99,999.....	2	6	0	0	0	0	0	0
100,000 and over.....	0	2	0	0	0	0	0	0
Total.....	177	106	60	33	70	11	6	0

Distribution of E.U.S.C. Ships by Age Groups During 1963

(a) In U.S. Trade
(b) Not in U.S. Trade

Age groupings	Number of tankers		Number of Freighters		Number of bulk carriers		Number of combination pass./cargo	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Under 5 years.....	25	12	0	0	15	4	0	0
5 to 9 years.....	75	31	1	0	22	3	2	0
10 to 14 years.....	34	10	2	1	8	0	0	0
15 to 19 years.....	23	19	13	7	4	1	1	0
20 years and over.....	20	34	44	25	21	3	3	0
Total.....	177	106	60	33	70	11	6	0

The 4.7 million tons of exports were somewhat larger than the 4 million tons which moved in 1960. Much of this cargo consisted of grains, coal, scrap iron and steel, phosphates, sulphur and petroleum products.

TYPES OF SERVICE

Tankers comprised the largest group of ships under effective United States control (see Table 9). It has already been noted that they carried two-thirds of the total cargoes transported by all E.U.S.C. ships in 1963.

Freighters and bulk carriers were employed primarily in industrial service; i.e., the sailings were made in connection with the industrial or commercial operations of a specific company, with the shipping function constituting an integral part of the company's commercial or industrial ac-

tivities. It is estimated that of the 16.8 million tons of dry cargo imports carried by E.U.S.C. ships in 1963, about 75 percent to 80 percent was carried by industrial carriers.

Ships, other than industrial carriers, engaged in irregular or tramp services carried practically all of the export cargo which moved by freighters and bulk carriers and about 20 percent to 25 percent of the dry cargo imports.

The few thousand tons of cargo that moved in liner service were carried by ships which operated on a scheduled berth service outbound while operating as industrial carriers inbound.¹⁵ Also included with liner cargoes are the very small cargo tonnages carried by cruise ships on the inbound and outbound legs of their voyages.

¹⁵Primarily ships operated by fruit and aluminum companies.

U.S. FLAG VERSUS E.U.S.C. SHIPS IN U.S. FOREIGN TRADE

There were 734 *different*¹⁶ U.S. flag ships that made one or more sailings with cargo, during 1963, in the oceanborne foreign trade of the United States. They carried 26.6 million tons of cargo or 8.5 percent of this country's international seaborne commerce. The latter tonnage is less than one-half the 60.8 million tons carried by the 313 E.U.S.C. ships.

Table 8 illustrates clearly the marked difference that existed, not only in the kinds of cargoes carried, but in the distributions of cargoes by types of service. For example, 92 percent of the total cargo movement by E.U.S.C. ships was inbound and was comprised largely of tanker cargoes. On the other hand, 64 percent of the total cargo movement carried by U.S. flag ships was in the export trade and consisted predominantly of general cargo moving in liner service. In this context it will be noted that U.S. flag ships in liner service accounted for 52 percent of the total cargoes carried by U.S. flag ships inbound and outbound—in contrast to the E.U.S.C. ships that carried .07 percent.

One of the principal differences between the operations of U.S. flag and E.U.S.C. ships is that of purpose. On average, throughout 1963, about 80 percent of the number and 73 percent of the deadweight tonnage of the U.S. flag ships in foreign trade operated as common carriers. They were employed on a predetermined and fixed

itinerary over a given route at relatively regular intervals, and their schedules were advertised long before sailing, so that cargoes could be solicited from the public.

With the exception of some of the companies operating outbound in "liner" service and in "industrial" service inbound, E.U.S.C. ships in United States foreign trade operated primarily as contract carriers. Independent owners, whose ships accounted for somewhat more than one-half of the number and tonnage of all E.U.S.C. ships, operated on a contract basis for the carriage of bulk materials, either liquid or dry cargo. Transit time was not as important to the U.S. importer as the cost at which the cargo, predominantly of relatively low value, could be moved. A number of the independent owners of tankers and bulk carriers chartered their ships on a long term basis to foreign subsidiary shipping and/or producing companies of U.S. industrial concerns, which are dependent upon foreign sources for petroleum products, agricultural commodities and numerous raw materials. American oil, steel, fruit, bauxite, and other industrial companies, through foreign owned or controlled subsidiaries, operated about 43 percent of the number and 49 percent of the tonnage of the E.U.S.C. ships in U.S. foreign trade, in order to have a relatively low-cost, dependable means of serving their own import requirements.

The following table shows the distribution of E.U.S.C. ships in United States foreign trade by type of ship and by type of industry group controlling their operations in 1963.

E.U.S.C. Ships in U.S. Foreign Trade by Type of Ship and by Category
of Industrial Group Controlling Their Operations in 1963

(In thousands of deadweight tons)

Industrial group	Total		Tankers		Bulk carriers		Freighters		Pass./cargo combination	
	No.	Dwt.	No.	Dwt.	No.	Dwt.	No.	Dwt.	No.	Dwt.
Oil.....	100	3,666	100	3,666	...	.....	...	.....	...	.....
Iron and steel.....	8	392	...	.....	8	392	...	.....	...	.....
Aluminum.....	7	74	...	.....	7	74	...	.....	...	.....
Other industrial.....	20	178	1	11	7	111	12	56	...	.....
Independent.....	178	4,488	76	2,532	48	1,422	48	507	6	27
Total.....	313	8,798	177	6,209	70	1,999	60	563	6	27

Source: Military Sea Transportation Service and Office of Statistics, Maritime Administration.

Conclusions

1. The 313 million long tons of cargoes which were carried by ships of all flags in United States foreign trade in 1963 was the largest volume ever recorded. It exceeded the cargo tonnage moved in 1962 by 21 million tons and the annual average for the 10-year period 1953-62 by 75 million tons.

¹⁶Of the 734 ships, 101 were tankers, 600 were freighters and bulk carriers combined and 33 were combination passenger-cargo ships.

2. Despite the overall increase, U.S. flag ships carried only 26.6 million tons, or 8.5 percent of the total tonnage volume, compared with 8.9 percent in 1962. In this connection it should be noted that the 26.6 million tons about equaled the annual average volume for the period 1958-62 and were 10.4 million tons less than the annual average for the 1953-62 decade.

3. Revenue earnings of U.S. flag ships engaged in liner service outbound from the United States would appear to be higher than those of foreign flag ships. In 1963, the cargo mix for U.S. flag ships was 3.4 tons of general cargo to 1 ton of bulk cargo, compared with a ratio of 2 to 1 for foreign flag liners.

4. In this connection it should be noted that Government-sponsored cargoes (excluding defense shipments) comprised 52 percent of total exports carried by U.S. flag ships in liner service.

5. Conversely, U.S. flag ships carried a *higher* ratio of bulk cargoes in liner service inbound than foreign flag ships. The ratios were 6.3 tons of general cargo to 1 ton of bulk cargo for U.S. flag ships, compared with a ratio of 7.4 to 1 for foreign flag ships.

6. The trend of dry and liquid bulk cargo exports and imports carried by ships of all flags is constantly increasing, while general cargo movements have remained relatively stable.

7. Since 1954, however, U.S. flag ships carried a decreasing proportion of the liner, tramp and tanker cargo movements, despite the allocations of cargoes to U.S. flag ships under the cargo preference laws.

8. Cargo tonnages carried by U.S. flag ships are not keeping pace with the increase noted in the nation's overall oceanborne foreign trade. It would seem, therefore, that unless positive measures are taken to correct the conditions that affect the ability of the American merchant marine to compete more actively in the carriage of this country's international seaborne commerce, particularly dry bulk and liquid bulk cargoes, a continued downward trend in its relative participation is indicated.

9. Even if the cargo tonnages carried by foreign flag ships under the effective control of the United States were to be added to those carried by U.S. flag ships, the absolute as well as the relative position of the combined fleets showed a downward trend. In 1960¹⁷ the combined fleet carried *92.3 million long tons, or 33.8 percent* of total United States oceanborne foreign trade. In 1963, cargoes carried by both fleets *declined to 87.4 million tons, or 28 percent* of the 313 million tons noted above.

¹⁷The first and only year studied prior to 1963. See "An Analysis of the Ships Under Effective U.S. Control and their Employment in U.S. Foreign Trade During 1960," published by the U.S. Department of Commerce, Washington, D.C., February 1962. Price 15 cents.

Table 1.--Participation of U.S., and Foreign Flag Ships,* in U.S. Commercial Ocean-
(In millions)

	1937**		1938**		1954		1955		1956	
	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent
EXPORTS AND IMPORTS--TOTAL.....	82.9	100.0	74.6	100.0	156.0	100.0	199.9	100.0	251.7	100.0
Total All Services--U.S. Flag.....	22.0	26.5	19.4	26.0	43.5	27.9	47.0	23.5	51.5	20.5
Total All Services--Foreign Flag....	60.9	73.5	55.2	74.0	112.5	72.1	152.9	76.5	200.2	79.5
Liner.....	**36.1	43.6	**29.2	39.1	39.0	25.0	43.9	22.0	47.0	18.7
U.S. Flag.....	15.6	18.8	10.9	14.6	14.7	9.4	17.2	8.6	18.6	7.4
Foreign Flag.....	20.5	24.8	18.3	24.5	24.3	15.6	26.7	13.4	28.4	11.3
Irregular.....	**18.0	21.7	**14.9	20.0	52.2	33.5	81.8	40.9	109.6	43.5
U.S. Flag.....	.0	0.0	0.7	1.0	9.3	6.0	12.7	6.4	14.7	5.9
Foreign Flag.....	18.0	21.7	14.2	19.0	42.9	27.5	69.1	34.5	94.9	37.6
Tanker.....	28.8	34.7	30.5	40.9	64.8	41.5	74.2	37.1	95.1	37.8
U.S. Flag.....	6.4	7.7	7.8	10.4	19.5	12.5	17.1	8.5	18.2	7.2
Foreign Flag.....	22.4	27.0	22.7	30.5	45.3	29.0	57.1	28.6	76.9	30.6
EXPORTS.....	43.8	100.0	45.0	100.0	54.5	100.0	82.4	100.0	111.2	100.0
Total All Services--U.S. Flag.....	9.1	20.7	8.5	18.9	12.6	23.1	15.6	18.9	18.9	17.0
Total All Services--Foreign Flag....	34.7	79.3	36.5	81.1	41.9	76.9	66.8	81.1	92.3	83.0
Liner.....	**17.3	39.5	**15.2	33.8	24.4	44.8	27.3	33.1	29.4	26.4
U.S. Flag.....	7.4	16.9	5.3	11.8	8.9	16.3	10.5	12.7	11.5	10.3
Foreign Flag.....	9.9	22.6	9.9	22.0	15.5	28.5	16.8	20.4	17.9	16.1
Irregular.....	** 8.0	18.3	** 8.3	18.4	21.8	40.0	45.8	55.6	66.3	59.6
U.S. Flag.....	.0	0.0	0.2	0.4	1.9	3.5	3.6	4.4	5.1	4.6
Foreign Flag.....	8.0	18.3	8.1	18.0	19.9	36.5	42.2	51.2	61.2	55.0
Tanker.....	18.5	42.2	21.5	47.8	8.3	15.2	9.3	11.3	15.5	14.0
U.S. Flag.....	1.7	3.8	3.0	6.7	1.8	3.3	1.5	1.8	2.3	2.1
Foreign Flag.....	16.8	38.4	18.5	41.1	6.5	11.9	7.8	9.5	13.2	11.9
IMPORTS.....	39.1	100.0	29.6	100.0	101.5	100.0	117.5	100.0	140.5	100.0
Total All Services--U.S. Flag.....	12.9	33.0	10.9	36.8	30.9	30.4	31.4	26.7	32.6	23.2
Total All Services--Foreign Flag....	26.2	67.0	18.7	63.2	70.6	69.6	86.1	73.3	107.9	76.8
Liner.....	**18.8	48.1	**14.0	47.3	14.6	14.4	16.6	14.1	17.6	12.5
U.S. Flag.....	8.2	21.0	5.6	18.9	5.8	5.7	6.7	5.7	7.1	5.0
Foreign Flag.....	10.6	27.1	8.4	28.4	8.8	8.7	9.9	8.4	10.5	7.5
Irregular.....	**10.0	25.6	** 6.6	22.3	30.4	29.9	36.0	30.6	43.3	30.8
U.S. Flag.....	.0	0.0	0.5	1.7	7.4	7.2	9.1	7.7	9.6	6.8
Foreign Flag.....	10.0	25.6	6.1	20.6	23.0	22.7	26.9	22.9	33.7	24.0
Tanker.....	10.3	26.3	9.0	30.4	56.5	55.7	64.9	55.3	79.6	56.7
U.S. Flag.....	4.7	12.0	4.8	16.2	17.7	17.5	15.6	13.3	15.9	11.2
Foreign Flag.....	5.6	14.3	4.2	14.2	38.8	38.2	49.3	42.0	63.7	45.3

*1,000 gross tons and over.

**Data for 1937 and 1938 are not strictly comparable since "Industrial" services in these years were included with "Liner" services rather than "Irregular" services as they have been since 1951.

NOTE: Figures have been rounded.

Source: Office of Statistics, Maritime Administration.

Borne Foreign Trade, by Type of Service, Calendar Years 1937, 1938, 1954-63
of long tons)

1957		1958		1959		1960		1961		1962		1963	
Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent
281.5	100.0	250.0	100.0	263.0	100.0	272.8	100.0	268.6	100.0	291.7	100.0	312.7	100.0
50.2	17.8	29.1	11.6	25.6	9.7	28.6	10.5	23.6	8.8	26.0	8.9	26.6	8.5
231.3	82.2	220.9	88.4	237.4	90.3	244.2	89.5	245.0	91.2	265.7	91.1	286.1	91.5
46.7	16.6	43.5	17.4	46.2	17.6	48.3	17.7	46.5	17.3	47.0	16.1	47.2	15.1
18.4	6.5	14.4	5.7	13.8	5.3	14.6	5.3	12.7	4.7	13.2	4.5	13.8	4.4
28.3	10.1	29.1	11.7	31.4	12.3	33.7	12.4	33.8	12.6	33.8	11.6	33.4	10.7
128.8	45.8	102.1	40.8	105.5	40.1	108.5	39.8	107.5	40.0	124.5	42.7	139.5	44.6
15.4	5.5	8.5	3.4	7.5	2.8	7.8	2.9	7.4	2.7	7.7	2.7	7.2	2.3
113.4	40.3	93.6	37.4	98.0	37.3	100.7	36.9	100.1	37.3	116.8	40.0	132.3	42.3
106.0	37.6	104.4	41.8	111.3	42.3	116.0	42.5	114.6	42.7	120.2	41.2	126.0	40.3
16.4	5.8	6.3	2.5	4.3	1.6	6.2	2.3	3.4	1.3	5.1	1.7	5.6	1.8
89.6	31.8	98.1	39.3	107.0	40.7	109.8	40.2	111.2	41.4	115.1	39.5	120.4	38.5
129.1	100.0	90.3	100.0	83.6	100.0	95.5	100.0	100.7	100.0	105.1	100.0	121.7	100.0
21.3	16.5	13.8	15.3	12.1	14.5	15.3	16.0	14.7	14.6	15.4	14.7	17.1	14.0
107.8	83.5	76.5	84.7	71.5	85.5	80.2	84.0	86.0	85.4	89.7	85.3	104.6	85.9
30.5	23.6	27.6	30.5	27.6	33.0	31.3	32.8	30.5	30.3	29.8	28.4	29.4	24.2
11.7	9.1	8.8	9.7	7.8	9.3	9.2	9.6	8.5	8.4	8.7	8.3	9.2	7.6
18.8	14.5	18.8	20.8	19.8	23.7	22.1	23.2	22.0	21.9	21.1	20.1	20.2	16.6
77.6	60.1	52.9	58.6	44.5	53.2	49.1	51.4	56.3	55.9	62.3	59.2	78.3	64.3
6.5	5.0	3.2	3.6	2.9	3.5	3.3	3.5	4.2	4.2	4.3	4.1	4.8	3.9
71.1	55.1	49.7	55.0	41.6	49.7	45.8	47.9	52.1	51.7	58.0	55.1	73.5	60.4
21.0	16.3	9.8	10.9	11.5	13.8	15.1	15.8	13.9	13.8	13.0	12.4	13.9	11.4
3.1	2.4	1.8	2.0	1.4	1.7	2.8	2.9	2.0	2.0	2.4	2.3	3.0	2.5
17.9	13.9	8.0	8.9	10.1	12.1	12.3	12.9	11.9	11.8	10.6	10.1	10.9	8.9
152.4	100.0	159.7	100.0	179.4	100.0	177.3	100.0	167.9	100.0	186.6	100.0	191.0	100.0
28.9	19.0	15.4	9.6	13.5	7.5	13.3	7.5	8.9	5.3	10.6	5.7	9.6	5.0
123.5	81.0	144.3	90.4	165.9	92.5	164.0	92.5	159.0	94.7	176.0	94.3	181.4	95.0
16.2	10.6	15.9	10.0	18.6	10.4	17.0	9.6	16.0	9.5	17.2	9.2	17.8	9.3
6.7	4.4	5.6	3.5	6.0	3.4	5.4	3.1	4.2	2.5	4.5	2.4	4.6	2.4
9.5	6.2	10.3	6.5	12.6	7.0	11.6	6.5	11.8	7.0	12.7	6.8	13.2	6.9
51.2	33.6	49.2	30.8	61.0	34.0	59.4	33.5	51.2	30.5	62.2	33.3	61.1	32.0
8.9	5.8	5.3	3.3	4.6	2.5	4.5	2.5	3.2	1.9	3.4	1.8	2.4	1.3
42.3	27.8	43.9	27.5	56.4	31.5	54.9	31.0	48.0	28.6	58.8	31.5	58.7	30.7
85.0	55.8	94.6	59.2	99.8	55.6	100.9	56.9	100.7	60.0	107.2	57.5	112.1	58.7
13.3	8.8	4.5	2.8	2.9	1.6	3.4	1.9	1.4	.8	2.7	1.5	2.6	1.4
71.7	47.0	90.1	56.4	96.9	54.0	97.5	55.0	99.3	59.2	104.5	56.0	109.5	57.3

Table 2.—Participation of Merchant Ships,¹ by Flag of Registry, in the Commercial Oceanborne
(In thousands)

Flag	ALL SERVICES						DRY CARGO, LINER					
	Total		Exports		Imports		Total		Exports		Imports	
	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
Total.....	312,732	100.0	121,670	100.0	191,062	100.0	47,217	100.0	29,447	100.0	17,770	100.0
Liberia.....	83,006	26.5	14,441	11.9	68,565	35.9	4,254	.9	258	.9	166	.9
Norway.....	54,181	17.3	20,308	16.7	33,872	17.7	6,057	12.8	3,622	12.3	2,436	13.7
United States.....	26,625	8.5	17,063	14.0	9,562	5.0	13,798	29.2	9,231	31.3	4,567	25.7
United Kingdom.....	22,324	7.1	7,266	6.0	15,058	7.9	2,814	6.0	1,629	5.5	1,185	6.7
Greece.....	20,878	6.7	11,907	9.8	8,971	4.7	685	1.4	420	1.4	264	1.5
Panama.....	18,515	5.9	2,269	1.9	16,246	8.5	96	.2	73	.2	23	.1
Italy.....	12,340	3.9	7,785	6.4	4,555	2.4	980	2.1	797	2.7	184	1.0
Germany (West).....	10,595	3.4	6,420	5.3	4,175	2.2	2,836	6.0	1,704	5.8	1,132	6.4
Japan.....	9,730	3.1	7,633	6.3	2,097	1.1	5,345	11.3	3,576	12.1	1,769	10.0
Canada.....	8,956	2.9	2,221	1.8	6,735	3.5	114	.2	77	.3	36	.2
Netherlands.....	8,720	2.8	3,104	2.5	5,616	2.9	2,672	5.7	1,563	5.3	1,109	6.2
Sweden.....	8,643	2.8	4,378	3.6	4,265	2.2	2,216	4.7	1,125	3.8	1,091	6.1
Denmark.....	4,844	1.5	2,136	1.8	2,708	1.4	1,341	2.8	790	2.7	551	3.1
France.....	3,896	1.2	3,073	2.5	823	.4	403	.9	263	.9	141	.8
Belgium.....	1,814	.6	1,081	.9	733	.4	818	1.7	396	1.3	423	2.4
Israel.....	1,617	.5	1,294	1.1	323	.2	365	.8	246	.8	119	.7
Yugoslavia.....	1,566	.5	1,268	1.0	298	.2	677	1.4	445	1.5	232	1.3
Spain.....	1,536	.5	1,152	.9	384	.2	139	.3	125	.4	14	.1
Mexico.....	1,171	.4	179	.1	992	.5	200	.4	90	.3	111	.6
China (Formosa).....	928	.3	599	.5	329	.2	443	.9	257	.9	186	1.0
Lebanon.....	763	.2	556	.5	208	.1	0	0	0	0	0	0
Chile.....	700	.2	300	.2	400	.2	277	.6	134	.5	142	.8
India.....	663	.2	494	.4	169	.1	454	1.0	357	1.2	97	.5
Finland.....	597	.2	338	.3	260	.1	468	1.0	259	.9	209	1.2
Colombia.....	591	.2	323	.3	268	.1	567	1.2	300	1.0	266	1.5
All other.....	7,533	2.4	4,082	3.3	3,450	1.8	3,028	6.4	1,710	5.8	1,317	7.4

¹1,000 gross tons and over. *Less than .05.

Table 3.—Participation of U.S., National, Pan.-Hon.-Lib., and Other Flag Ships¹ in Commercial
(In thousands)

Country	OUTBOUND AND INBOUND								OUTBOUND			
	Total, All Flags		Total, U.S. Flag		Total, National Flag		Total, Pan.-Hon.-Lib. Flags		Total, Other Flags		Total, All Flags	
	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
All Countries.... ³	47,217	100	13,798	29	14,036	30	544	1	18,838	40	29,447	100
18 maritime countries..	27,413	100	5,730	21	11,442	42	181	1	10,060	36	16,943	100
Argentina.....	599	100	264	44	157	26	0	0	178	30	302	100
Belgium.....	2,899	100	291	10	495	17	5	(*)	2,108	73	1,032	100
Brazil.....	1,355	100	595	44	204	15	44	3	511	38	614	100
Denmark.....	321	100	37	12	123	38	0	0	160	50	222	100
Finland.....	437	100	19	4	215	49	0	0	203	47	89	100
France.....	1,034	100	211	20	218	21	6	1	600	58	670	100
Germany (West).....	2,523	100	415	16	828	33	6	(*)	1,273	51	1,771	100
Greece.....	290	100	172	59	17	6	1	1	100	34	223	100
India.....	1,981	100	1,098	55	434	22	15	1	434	22	1,407	100
Italy.....	1,903	100	384	20	785	41	36	2	698	37	1,419	100
Japan.....	7,280	100	972	13	4,914	68	60	1	1,334	18	4,713	100
Lebanon.....	113	100	40	35	0	0	0	0	74	65	105	100
Netherlands.....	2,124	100	276	13	631	30	4	(*)	1,213	57	1,626	100
Norway.....	435	100	20	5	390	90	0	0	25	5	197	100
Spain.....	464	100	187	40	107	23	3	1	167	36	322	100
Sweden.....	835	100	30	4	665	80	0	0	140	16	455	100
United Kingdom.....	2,423	100	624	26	982	41	0	0	817	33	1,525	100
Yugoslavia.....	397	100	94	24	275	69	1	(*)	26	7	252	100
All other..... ³	19,804	100	8,068	41	2,594	13	363	2	8,778	44	12,504	100

¹1,000 gross tons and over.

²Includes cruise (see footnote 3).

³Includes 1 cruise (principally Pan.-Hon.-Lib. flag).

*Less than 0.5.

Foreign Trade of the United States, by Type of Service, During the Calendar Year 1963
of long tons)

DRY CARGO, OTHER THAN LINER						TANKER					
Total		Exports		Imports		Total		Exports		Imports	
Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
139,489	100.0	78,335	100.0	61,154	100.0	126,026	100.0	13,888	100.0	112,138	100.0
32,996	23.7	11,563	14.8	21,433	35.0	49,586	39.3	2,620	18.9	46,966	41.9
32,886	17.1	12,361	15.8	11,525	18.8	24,237	19.2	4,326	31.1	19,911	17.8
7,256	5.2	4,842	6.2	2,414	3.9	5,571	4.4	2,990	21.5	2,581	2.3
10,597	7.6	5,049	6.4	5,549	9.1	8,913	7.1	589	4.2	8,324	7.4
14,677	10.5	10,735	13.7	3,943	6.4	5,516	4.4	753	5.4	4,764	4.2
3,269	2.3	1,766	2.3	1,503	2.5	15,150	12.0	430	3.1	14,720	13.1
9,064	6.5	6,802	8.7	2,261	3.7	2,297	1.8	187	1.3	2,110	1.9
5,983	4.3	4,655	5.9	1,329	2.2	1,775	1.4	61	.4	1,714	1.5
3,599	2.6	3,504	4.5	96	.2	786	.6	554	4.0	233	.2
7,783	5.6	2,109	2.7	5,674	9.3	1,060	.8	35	.2	1,025	.9
2,273	1.6	1,460	1.9	813	1.3	3,775	3.0	81	.6	3,694	3.3
3,910	2.8	2,786	3.6	1,124	1.8	2,517	2.0	467	3.4	2,050	1.8
1,691	1.2	1,086	1.4	606	1.0	1,811	1.4	260	1.9	1,551	1.4
3,062	2.2	2,754	3.5	308	.5	431	.3	57	.4	374	.3
552	.4	493	.6	59	.1	443	.4	192	1.4	251	.2
1,252	.9	1,048	1.3	204	.3	0	0	0	0	0	0
859	.6	801	1.0	58	.1	30	(*)	22	.2	8	(*)
1,186	.9	1,026	1.3	160	.3	211	.2	0	0	211	.2
(*)	(*)	(*)	(*)	0	0	970	.8	89	.6	881	.8
486	.3	342	.4	143	.2	0	0	0	0	0	0
763	.5	556	.7	207	.3	0	0	0	0	0	0
424	.3	166	.2	258	.4	0	0	0	0	0	0
209	.1	136	.2	72	.1	0	0	0	0	0	0
129	.1	79	.1	50	.1	0	0	0	0	0	0
25	(*)	23	(*)	2	(*)	0	0	0	0	0	0
3,558	2.6	2,193	2.8	1,363	2.2	947	.8	175	1.3	770	.7

Note: Figures have been rounded. Source: Office of Statistics, Maritime Administration.

Oceanborne Liner² Trades Between the United States and Principal Maritime Countries During 1963
of long tons)

OUTBOUND--Con.						INBOUND									
Total, National Flag		Total, Pan.-Hon.-Lib. Flags		Total, Other Flags		Total, All Flags		Total, U.S. Flag		Total, National Flag		Total, Pan.-Hon.-Lib. Flags		Total, Other Flags	
Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
9,007	31	352	1	10,857	37	17,770	100	4,567	26	5,029	28	192	1	7,982	45
7,534	45	122	1	5,847	34	10,470	100	2,289	22	3,908	37	59	1	4,214	40
66	22	0	0	68	22	297	100	96	32	91	31	0	0	110	37
192	19	2 (*)		764	74	1,867	100	217	12	303	16	3 (*)		1,344	72
115	19	30	5	164	26	740	100	290	39	90	12	14	2	347	47
83	38	0	0	103	46	98	100	2	2	40	40	0	0	57	58
56	63	0	0	30	34	349	100	17	5	160	46	0	0	172	49
145	22	4	1	409	60	364	100	98	27	73	20	2	1	191	52
573	32	5 (*)		936	53	751	100	157	21	255	34	1 (*)		338	45
14	6	1	1	75	34	67	100	39	58	3	5	(*)	(*)	25	37
345	24	10	1	197	14	574	100	244	43	89	15	4	1	237	41
662	47	29	2	505	35	485	100	162	34	123	25	7	1	193	40
3,471	74	33	1	747	15	2,568	100	510	20	1,444	56	26	1	587	23
0	0	0	0	66	63	9	100	1	12	0	0	0	0	8	88
425	26	4 (*)		1,009	62	498	100	87	18	206	41	0	0	205	41
168	85	0	0	16	8	238	100	7	3	222	93	0	0	8	4
97	30	2	1	92	28	142	100	57	40	10	7	1	1	75	52
335	74	0	0	99	21	379	100	8	2	331	87	0	0	40	11
644	42	0	0	539	36	899	100	283	32	338	38	0	0	278	30
144	57	1 (*)		26	11	145	100	14	10	131	90	0	0	0	0
1,474	12	230	2	5,010	40	7,300	100	2,278	31	1,121	15	133	2	3,768	52

Note: Figures have been rounded. Source: Office of Statistics, Maritime Administration.

Table 4.—Participation of U.S. National, Pan.-Hon.-Lib., and Other Flag Ships¹ in Commercial Oceanborne

(In thousand)

Country	OUTBOUND AND INBOUND										OUTBOUND			
	Total, All Flags		Total, U.S. Flag		Total, National Flag		Total, Pan.-Hon.-Lib. Flags		Total, Other Flags		Total, All Flags		Total, U.S. Flag	
	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
All countries....	139,489	100	7,256	5	25,667	18	36,688	26	69,878	51	78,335	100	4,842	6
18 Maritime countries..	69,689	100	2,506	4	16,684	24	12,708	18	37,791	54	64,290	100	2,220	3
Argentina.....	691	100	0	0	25	4	56	8	609	88	499	100	0	0
Belgium.....	3,955	100	45	1	178	5	541	14	3,192	80	3,259	100	43	1
Brazil.....	4,116	100	445	11	15	*	816	20	2,840	69	2,301	100	203	9
Denmark.....	578	100	0	0	18	3	36	6	524	91	564	100	0	0
Finland.....	110	100	0	0	26	23	0	0	84	77	50	100	0	0
France.....	3,045	100	0	0	2,126	70	129	4	790	26	2,899	100	0	0
Germany (West).....	6,174	100	0	0	1,785	29	907	15	3,482	56	5,739	100	0	0
Greece.....	319	100	23	7	165	52	73	23	57	18	220	100	23	11
India.....	3,114	100	1,480	48	40	1	336	11	1,258	40	2,886	100	1,437	50
Italy.....	9,878	100	0	0	4,967	50	2,543	26	2,368	24	9,717	100	0	0
Japan.....	19,147	100	0	0	3,596	19	4,708	25	10,843	56	18,577	100	0	0
Lebanon.....	*	100	0	0	0	0	0	0	*	100	0	0	0	0
Netherlands.....	10,386	100	39	*	258	3	1,751	17	8,338	80	10,168	100	39	*
Norway.....	607	100	0	0	463	76	2	*	142	24	428	100	0	0
Spain.....	2,831	100	33	1	884	31	533	19	1,381	49	2,589	100	33	1
Sweden.....	732	100	0	0	716	98	0	0	16	2	639	100	0	0
United Kingdom.....	2,424	100	0	0	739	31	192	8	1,492	61	2,185	100	0	0
Yugoslavia.....	1,583	100	441	28	683	43	85	5	374	24	1,568	100	441	28
All other.....	69,800	100	4,750	7	8,983	13	23,980	34	32,087	46	14,046	100	2,622	19

¹1,000 gross tons and over.²Irregular and industrial.

*Less than 0.5.

Table 5.—Participation of U.S. National, Pan.-Lib., and Other Flag Ships¹ in Commercial

(In thousand)

Country	OUTBOUND AND INBOUND										OUTBOUND			
	Total, All Flags		Total, U.S. Flag		Total, National Flag		Total, Pan.-Lib. Flags		Total, Other Flags		Total, All Flags		Total, U.S. Flag	
	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
All countries....	126,026	100	5,571	4	2,611	2	64,757	51	53,087	43	13,888	100	2,990	22
18 Maritime countries..	15,263	100	912	6	1,371	9	5,470	36	7,509	49	9,959	100	912	9
Argentina.....	337	100	0	0	42	12	54	16	241	72	30	100	0	0
Belgium.....	788	100	0	0	19	2	266	34	503	64	768	100	0	0
Brazil.....	535	100	0	0	147	27	77	14	312	59	198	100	0	0
Denmark.....	93	100	0	0	10	11	0	0	83	89	83	100	0	0
Finland.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
France.....	282	100	0	0	53	19	57	20	171	61	209	100	0	0
Germany (West).....	415	100	36	9	25	6	82	20	271	65	414	100	36	9
Greece.....	100	100	90	90	0	0	0	0	10	10	100	100	90	90
India.....	1,499	100	631	42	0	0	411	27	457	31	1,499	100	631	42
Italy.....	952	100	0	0	78	8	213	22	662	70	904	100	0	0
Japan.....	2,898	100	0	0	631	22	1,257	43	1,010	35	2,790	100	0	0
Lebanon.....	4,013	100	0	0	0	0	2,754	69	1,258	31	8	100	0	0
Netherlands.....	1,713	100	10	1	49	3	249	14	1,405	82	1,554	100	10	1
Norway.....	29	100	0	0	26	89	0	0	3	11	24	100	0	0
Spain.....	147	100	33	22	0	0	0	0	114	78	147	100	33	22
Sweden.....	269	100	0	0	24	9	0	0	245	91	267	100	0	0
United Kingdom.....	1,070	100	0	0	257	24	50	5	763	71	840	100	0	0
Yugoslavia.....	123	100	112	91	11	9	0	0	0	0	123	100	112	91
All other.....	110,763	100	4,659	4	1,240	1	59,287	54	45,577	41	3,929	100	2,078	53

¹1,000 gross tons and over.

Dry Cargo Trades, Other Than Liner,² Between the United States and Principal Maritime Countries During 1963
(of long tons)

OUTBOUND--Con.						INBOUND									
Total, National Flag		Total, Pan.- Hon.-Lib. Flags		Total, Other Flags		Total, All Flags		Total, U.S. Flag		Total, National Flag		Total, Pan.- Hon.-Lib. Flags		Total, Other Flags	
Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent
18,871	24	13,360	17	41,263	53	61,154	100	2,414	4	6,796	11	23,329	38	28,615	47
15,964	25	11,612	18	34,493	54	5,399	100	286	5	720	13	1,096	20	3,297	62
16	3	0	0	483	97	191	100	0	0	9	5	56	29	126	66
171	5	395	12	2,648	82	697	100	0	0	7	1	146	21	544	78
15	1	498	22	1,586	68	1,815	100	243	13	0	0	318	18	1,254	69
13	2	36	6	515	92	14	100	0	0	5	37	0	0	7	63
26	51	0	0	25	49	60	100	0	0	0	0	0	0	60	100
2,114	73	116	4	670	23	146	100	0	0	12	8	13	9	121	83
1,673	29	852	15	3,214	56	435	100	0	0	113	26	55	13	268	61
113	51	52	24	33	14	99	100	0	0	53	53	21	22	25	25
0	0	302	11	1,147	39	228	100	43	19	40	18	34	15	111	48
4,943	51	2,443	25	2,331	24	162	100	0	0	24	15	100	62	37	23
3,504	19	4,518	24	10,556	57	569	100	0	0	92	16	190	33	287	51
0	0	0	0	0	0	*	100	0	0	0	0	0	0	*	100
258	3	1,691	17	8,181	80	218	100	0	0	*	*	60	28	157	72
289	68	0	0	139	32	178	100	0	0	173	97	2	1	2	2
833	32	452	18	1,270	49	242	100	0	0	51	21	81	33	111	46
637	100	0	0	2	*	93	100	0	0	79	85	0	0	14	15
680	31	174	8	1,332	61	239	100	0	0	59	25	19	8	161	67
680	43	84	5	362	24	14	100	0	0	3	22	0	0	11	78
2,906	21	1,748	12	6,769	48	55,755	100	2,128	4	6,077	11	22,232	40	25,318	45

Note: Figures have been rounded. Source: Office of Statistics, Maritime Administration.

Oceanborne Tanker Trades Between the United States and Principal Maritime Countries During 1963
(of long tons)

OUTBOUND--Con.						INBOUND									
Total, National Flag		Total, Pan.-Lib. Flags		Total, Other Flags		Total, All Flags		Total, U.S. Flag		Total, National Flag		Total, Pan.-Lib. Flags		Total, Other Flags	
Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent	Tons	Per- cent
1,249	9	3,050	22	6,599	47	112,138	100	2,581	2	1,363	1	61,707	55	46,487	42
1,055	11	2,461	25	5,531	55	5,304	100	0	0	316	6	3,009	57	1,979	37
21	71	0	0	9	29	307	100	0	0	21	7	53	18	233	75
19	2	246	32	503	66	20	100	0	0	0	0	20	100	0	0
28	14	0	0	170	86	338	100	0	0	119	35	77	23	142	42
0	0	0	0	83	100	10	100	0	0	10	100	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	26	44	21	111	53	73	100	0	0	0	0	13	17	60	83
25	6	82	20	270	65	1	100	0	0	0	0	0	0	1	100
0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0
0	0	411	27	457	31	0	0	0	0	0	0	0	0	0	0
78	9	197	22	630	69	48	100	0	0	0	0	15	32	32	68
541	19	1,257	45	992	36	108	100	0	0	90	83	0	0	18	17
0	0	0	0	8	100	4,004	100	0	0	0	0	2,754	69	1,250	31
22	1	208	13	1,315	85	159	100	0	0	27	17	41	26	91	57
21	87	0	0	3	13	5	100	0	0	5	100	0	0	0	0
0	0	0	0	114	78	0	0	0	0	0	0	0	0	0	0
24	9	0	0	243	91	1	100	0	0	0	0	0	0	1	100
212	25	15	2	613	73	230	100	0	0	45	19	35	15	150	66
11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
194	5	589	15	1,068	27	106,834	100	2,581	2	1,046	1	58,698	55	44,509	42

Note: Figures have been rounded. Source: Office of Statistics, Maritime Administration.

Table 6.—Participation of U.S., National, and Other Flag Ships¹ in Total Commercial Oceanborne Foreign Trades Between the United States and Principal Countries, 1962 and 1963

(In millions of long tons)

Country	Total, All Flags				Total, U.S. Flag				Total, National Flag				Total, Other Flags			
	1963		1962		1963		1962		1963		1962		1963		1962	
	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent	Tons	Per-cent
All countries.....	312.7	100.0	291.7	100.0	26.6	8.5	26.0	8.9	42.3	13.5	37.0	12.7	243.8	78.0	228.7	78.4
18 Maritime countries..	112.3	100.0	96.0	100.0	9.1	8.1	9.2	9.6	29.5	26.3	26.5	27.6	73.7	65.6	60.2	62.8
Argentina.....	1.6	100.0	1.3	100.0	.3	16.2	.3	20.3	.2	13.8	.2	15.2	1.1	70.0	.8	64.5
Belgium.....	7.6	100.0	6.3	100.0	.3	4.4	.2	3.2	.7	9.1	.6	10.1	6.6	86.5	5.5	86.7
Brazil.....	6.0	100.0	6.6	100.0	1.0	17.3	1.3	20.1	.4	6.1	.5	6.9	4.6	76.6	4.8	73.0
Denmark.....	1.0	100.0	.9	100.0	(*)	3.7	(*)	1.1	.2	15.2	.1	17.1	.8	81.1	.7	81.8
Finland.....	.5	100.0	.5	100.0	(*)	3.5	(*)	8.6	.2	44.1	.2	33.9	.3	52.4	.3	57.5
France.....	4.4	100.0	2.6	100.0	.2	4.8	.2	7.2	2.4	55.0	1.0	40.0	1.8	40.2	1.4	52.8
Germany (West).....	9.1	100.0	8.9	100.0	.5	4.9	.3	3.5	2.6	29.0	2.5	27.7	6.0	66.1	6.1	68.8
Greece.....	.7	100.0	.6	100.0	.3	40.2	.2	39.2	.2	25.7	.2	28.7	.2	34.1	.2	32.1
India.....	6.6	100.0	5.6	100.0	3.2	48.7	2.9	51.7	.5	7.2	.3	4.5	2.9	44.1	2.5	43.8
Italy.....	12.7	100.0	11.2	100.0	.4	3.0	.4	3.6	5.8	45.8	5.3	46.9	6.5	51.2	5.5	49.5
Japan.....	29.3	100.0	23.2	100.0	1.0	3.3	.8	3.6	9.1	31.2	7.6	32.9	19.2	65.5	14.7	63.5
Lebanon.....	4.1	100.0	.....	.....	(*)	1.0	.....	.....	0	.....	.....	.....	4.1	99.0	.....	.....
Netherlands.....	14.2	100.0	13.4	100.0	.3	2.3	.3	2.5	.9	6.6	1.1	8.6	13.0	91.1	11.9	88.9
Norway.....	1.1	100.0	1.0	100.0	(*)	1.9	(*)	2.6	.9	82.1	.8	74.8	.2	16.0	.2	22.6
Spain.....	3.4	100.0	2.5	100.0	.3	7.4	.2	8.0	1.0	28.8	.9	37.2	2.2	63.8	1.4	54.8
Sweden.....	1.8	100.0	1.7	100.0	(*)	1.6	(*)	1.1	1.4	76.5	1.3	81.1	.4	21.9	.3	17.8
Turkey.....	.....	.....	1.6	100.0	.....	.....	8.9	49.7	.....	.....	.5	34.0	.....	.....	.3	16.3
United Kingdom.....	5.9	100.0	6.6	100.0	.6	10.6	.7	10.1	2.0	33.4	2.6	39.9	3.3	56.0	3.3	50.0
Yugoslavia.....	2.1	100.0	1.7	100.0	.6	30.8	.5	30.2	1.0	46.1	.8	46.7	.5	23.1	.4	23.1
All other.....	200.4	100.0	195.8	100.0	17.5	8.7	16.8	8.6	12.8	6.4	10.5	5.3	170.1	84.9	168.5	86.1

¹1,000 gross tons and over.

*Less than 0.05.

Note: Figures have been rounded; percentages derived from whole figures.

Source: Office of Statistics, Maritime Administration.

Table 7.—Inbound Commercial Sailings to Continental U.S., Alaska, Hawaii, and Puerto Rico Ports, by Type of Service and Flag of Ship¹ During 1963

Flag of registry	Total, All Services		Liner ²		Irregular ³		Tanker	
	Total number	Number with cargo	Total number	Number with cargo	Total number	Number with cargo	Total number	Number with cargo
All countries.....	25,115	18,898	9,325	8,130	10,353	5,973	5,437	4,795
United States.....	3,365	2,609	2,388	2,101	740	394	237	114
Total foreign.....	21,750	16,289	6,937	6,029	9,613	5,579	5,200	4,681
Total 20 countries.....	19,445	14,391	5,898	5,107	8,492	4,718	5,055	4,566
Argentina.....	75	69	63	63	6	4	6	2
Belgium.....	165	117	88	87	57	23	20	7
Brazil.....	65	59	52	51	1	0	12	8
Denmark.....	593	486	264	255	223	138	106	93
Finland.....	81	76	66	64	15	12	0	0
France.....	387	208	182	154	183	37	22	17
Germany (West).....	1,683	1,325	719	651	894	606	70	68
Greece.....	1,292	706	109	102	981	422	202	182
India.....	54	23	42	18	12	5	0	0
Italy.....	721	400	215	201	412	114	94	85
Japan.....	1,174	701	737	630	381	41	56	30
Lebanon.....	64	30	0	0	64	30	0	0
Liberia.....	3,673	2,942	196	128	1,602	983	1,875	1,831
Netherlands.....	1,056	890	588	524	285	193	183	173
Norway.....	3,808	2,944	1,013	910	1,489	988	1,306	1,046
Panama.....	1,165	827	276	84	322	191	567	552
Spain.....	189	74	57	36	125	31	7	7
Sweden.....	907	727	461	446	324	183	122	98
United Kingdom.....	2,145	1,700	690	624	1,050	710	405	366
Yugoslavia.....	148	87	80	79	66	7	2	1
All other foreign.....	2,305	1,898	1,039	922	1,121	861	145	115

¹1,000 gross tons and over.

²Excludes cruise (total: 256 foreign flag; and 20 U.S. flag).

³Includes industrial.

Source: Office of Statistics, Maritime Administration.

Table 8.—Commercial Cargoes Carried in the Oceanborne Foreign Trade of the U.S. by Ships¹ of all Registries, by U.S. Flag Ships, and by Ships Deemed by the Navy to be Under "Effective U.S. Control"³ in 1960 and 1963, by Type of Service

(In thousands of long tons)

Type of service	CARGO TONNAGES CARRIED IN U.S. FOREIGN TRADE						PERCENT CARRIED BY					
	By ships of all flags		By U.S. flag ships		By ships under "EUSC"		U.S. flag and "EUSC" ships		U.S. flag ships		Ships under "EUSC"	
	1963	1960	1963	1960	1963	1960	1963	1960	1963	1960	1963	1960
Exports and Imports..	312,732	272,925	26,625	28,612	60,822	63,688	28.0	33.8	8.5	10.5	19.4	23.3
Liner.....	47,217	48,255	13,798	14,570	42	200	29.3	30.6	29.2	30.2	0.1	0.4
Irregular.....	139,489	108,556	7,256	7,807	20,044	21,914	19.6	27.4	5.2	7.2	14.4	20.2
Tanker.....	126,026	116,114	5,571	6,235	40,736	41,574	36.7	41.2	4.4	5.4	32.3	35.8
Exports.....	121,670	95,516	17,063	15,237	4,683	4,050	17.9	20.2	14.0	16.0	3.8	4.2
Liner.....	29,447	31,265	9,231	9,160	34	180	31.5	29.9	31.3	29.3	0.1	0.6
Irregular.....	78,335	49,118	4,842	3,269	3,264	1,806	10.3	10.4	6.2	6.7	4.2	3.7
Tanker.....	13,888	15,133	2,990	2,808	1,385	2,064	31.5	32.2	21.5	18.6	10.0	13.6
Imports.....	191,062	177,409	9,562	13,375	56,139	59,637	34.4	41.1	5.0	7.5	29.4	33.6
Liner.....	17,770	16,990	4,567	5,410	8	20	25.8	31.9	25.7	31.8	(²)	0.1
Irregular.....	61,154	59,438	2,414	4,538	16,780	20,107	31.4	41.4	3.9	7.6	27.4	33.8
Tanker.....	112,138	100,981	2,581	3,427	39,351	39,510	37.4	42.5	2.3	3.4	35.1	39.1

¹Merchant ships of 1,000 gross tons and over, excluding Great Lakes cross trades operations under Panamanian, Honduran, and Liberian flags. ²Less than 0.05. ³Ships Source: Maritime Administration, Office of Statistics.

Table 9.—Ships¹ Deemed by the Navy to be Under "Effective U.S. Control" Which Operated in U.S. Commercial Oceanborne Foreign Trade, Calendar Years 1960 and 1963

Flag of registry	TOTAL						DRY CARGO ²					
	1963			1960			1963					
	Number of ships	DWT (000)	Number of sailings		Number of ships	DWT (000)	Number of sailings		Number of ships	DWT (000)	Number of sailings	
			Out	In			Out	In			Out	In
Honduran.....	13	67.0	153	156	16	73.1	274	277	12	55.9	151	154
Panamanian.....	72	2,048.6	801	802	93	2,084.0	1,076	1,076	15	169.4	383	384
Liberian.....	228	6,682.1	1,722	1,713	244	6,144.8	1,798	1,802	109	2,363.2	728	713
Total.....	313	8,797.7	2,676	2,671	353	8,301.9	3,148	3,155	136	2,588.5	1,262	1,251
Flag of registry	DRY CARGO ² --Con.						TANKER					
	1960			1963			1960					
	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)
Honduran.....	16	73.1	274	277	1	11.1	2	2	.....	.....	.....	.....
Panamanian.....	33	365.1	594	595	57	1,879.2	418	418	60	1,718.9	482	481
Liberian.....	125	2,180.9	814	816	119	4,318.9	994	1,000	119	3,963.9	984	986
Total.....	174	2,619.1	1,682	1,688	177	6,209.2	1,414	1,420	179	5,682.8	1,466	1,467

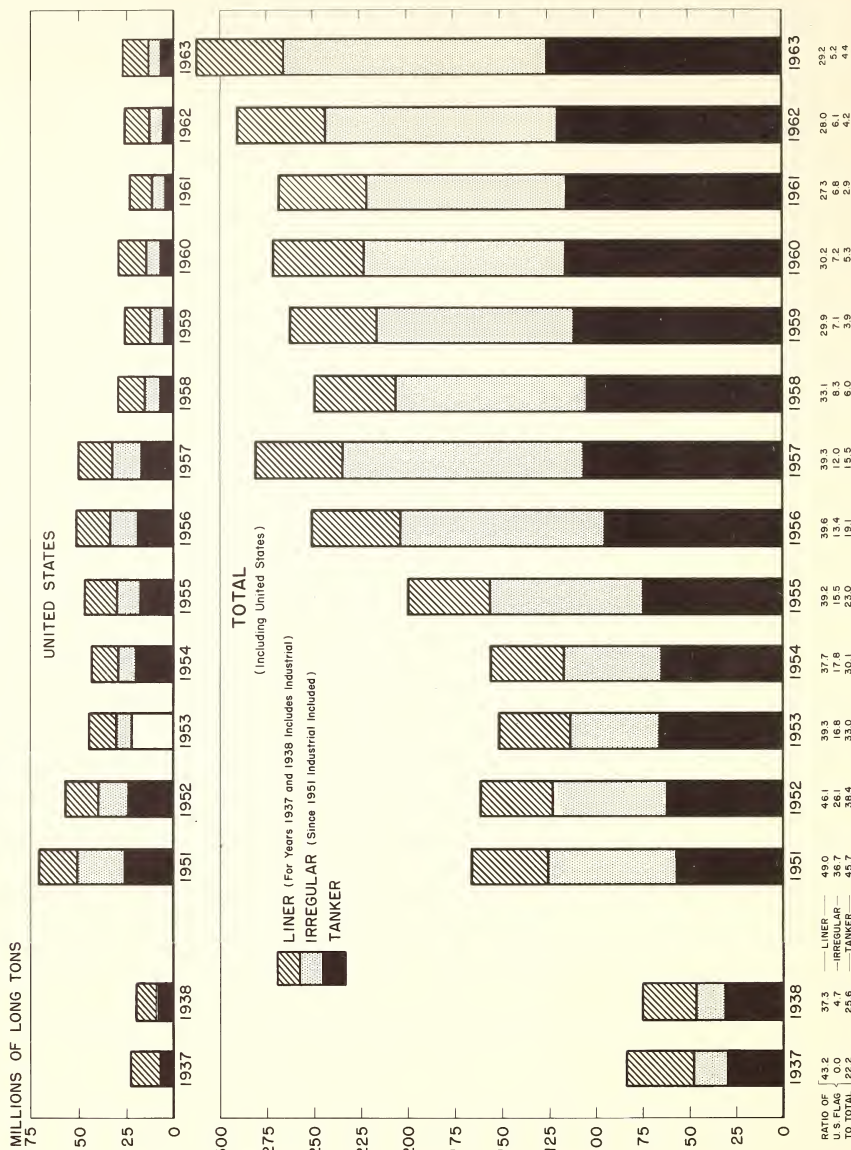
¹Merchant ships of 1,000 gross tons and over. ²Includes freighters, refrigerator ships, bulk carriers, ore carriers, ore oil carriers, and combination passenger/cargo ships. Source: Military Sea Transportation Service, and Maritime Administration, Office of Statistics.

Table 10.—Ships¹ Deemed by the Navy to be Under "Effective U.S. Control" Not Operating in U.S. Commercial Oceanborne Foreign Trade, Calendar Years 1960 and 1963

Flag of registry	TOTAL				DRY CARGO ²				TANKER			
	1963		1960		1963		1960		1963		1960	
	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)	No. of ships	DWT (000)
Honduran.....	.....	.....	1	11.1	.....	.....	.....	.....	.....	.....	1	11.1
Panamanian.....	53	815.3	63	942.9	.....	69.2	10	94.7	46	746.1	53	848.2
Liberian.....	97	2,975.1	123	2,946.8	37	674.8	40	474.4	60	2,300.3	83	2,472.4
Total.....	150	3,790.4	187	3,900.8	44	744.0	50	569.1	106	3,046.4	137	3,331.7

¹Merchant ships of 1,000 gross tons and over. ²See above. Source: Military Sea Transportation Service, and Maritime Administration, Office of Statistics.

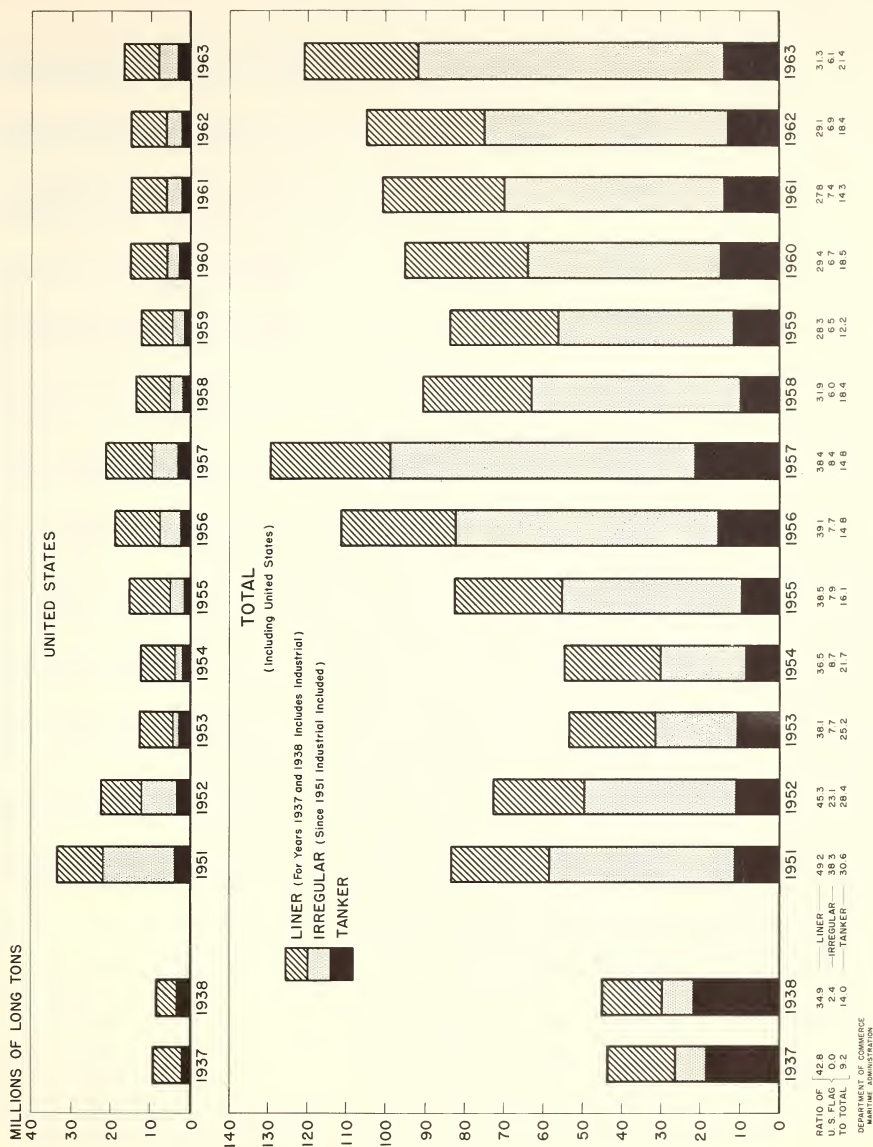
U. S. OCEANBORNE FOREIGN TRADE - EXPORTS & IMPORTS BY TYPE OF SERVICE, BY FLAG 1937 & 1938, 1951-1963 (Excludes Great Lakes, Cross Trades and Military Cargo)



U. S. OCEANBORNE FOREIGN TRADE - EXPORTS

BY TYPE OF SERVICE, BY FLAG 1937 & 1938, 1951-1963

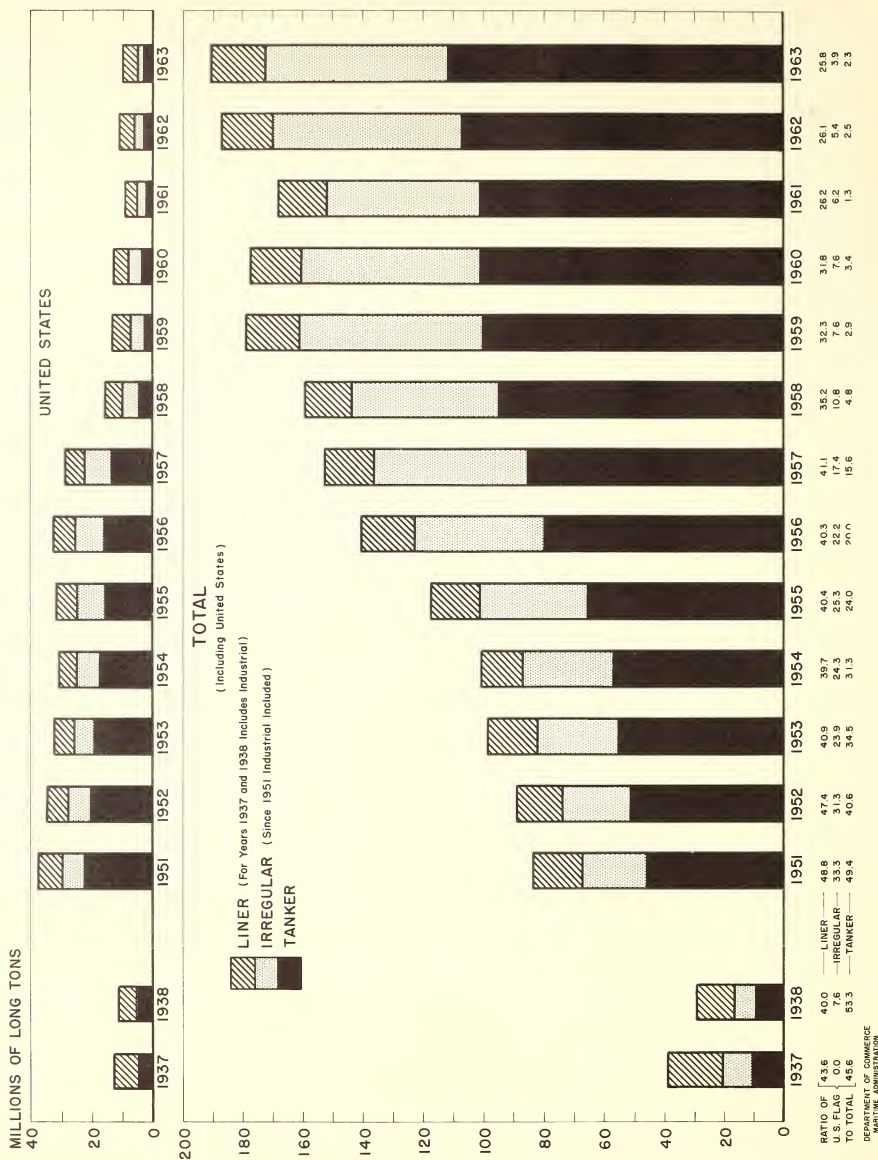
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U. S. OCEANBORNE FOREIGN TRADE - IMPORTS

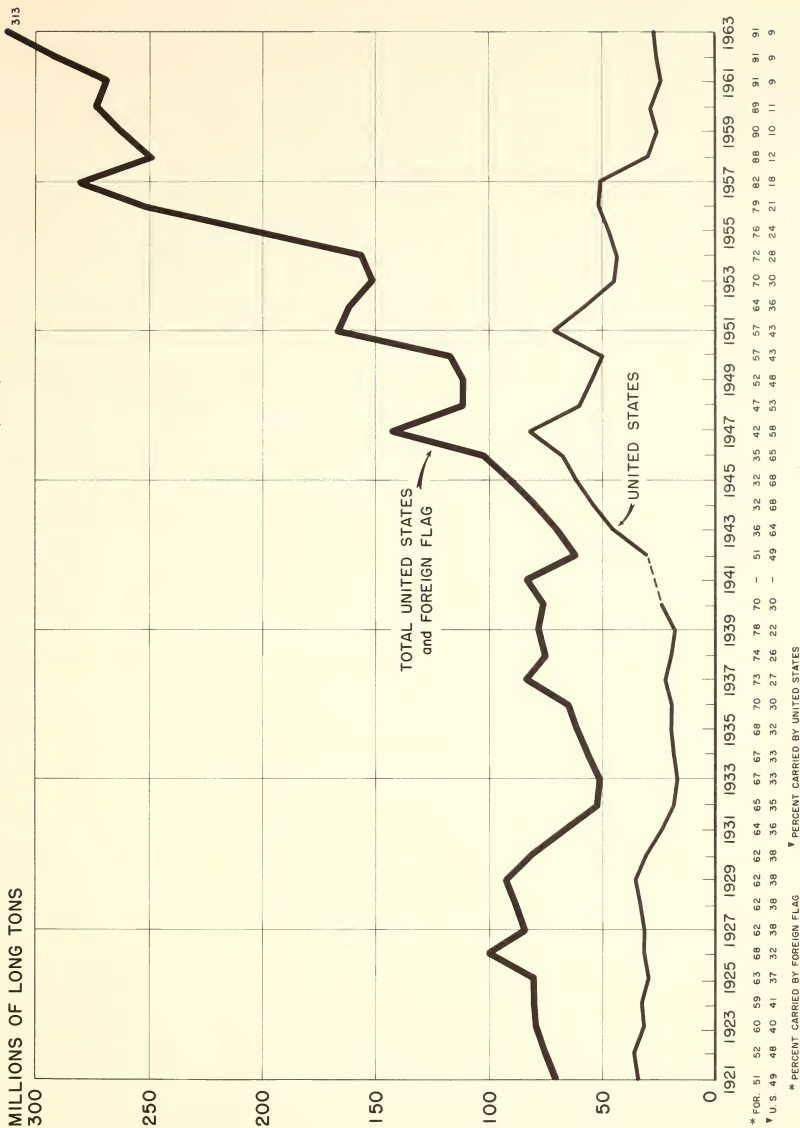
BY TYPE OF SERVICE, BY FLAG 1937 & 1938, 1951-1963

(Excludes Great Lakes, Cross Trades and Military Cargo)



TOTAL CARGO CARRIED BY DRY CARGO SHIPS AND TANKERS IN U. S. FOREIGN TRADE, 1921-1963

(Excludes Great Lakes, Cross Trades and Military Cargo)



* FOR 51 52 60 59 63 68 62 62 62 64 65 67 67 68 70 73 74 76 70 - 51 36 32 32 35 42 47 52 57 57 64 70 72 76 79 82 88 90 89 91 91 91

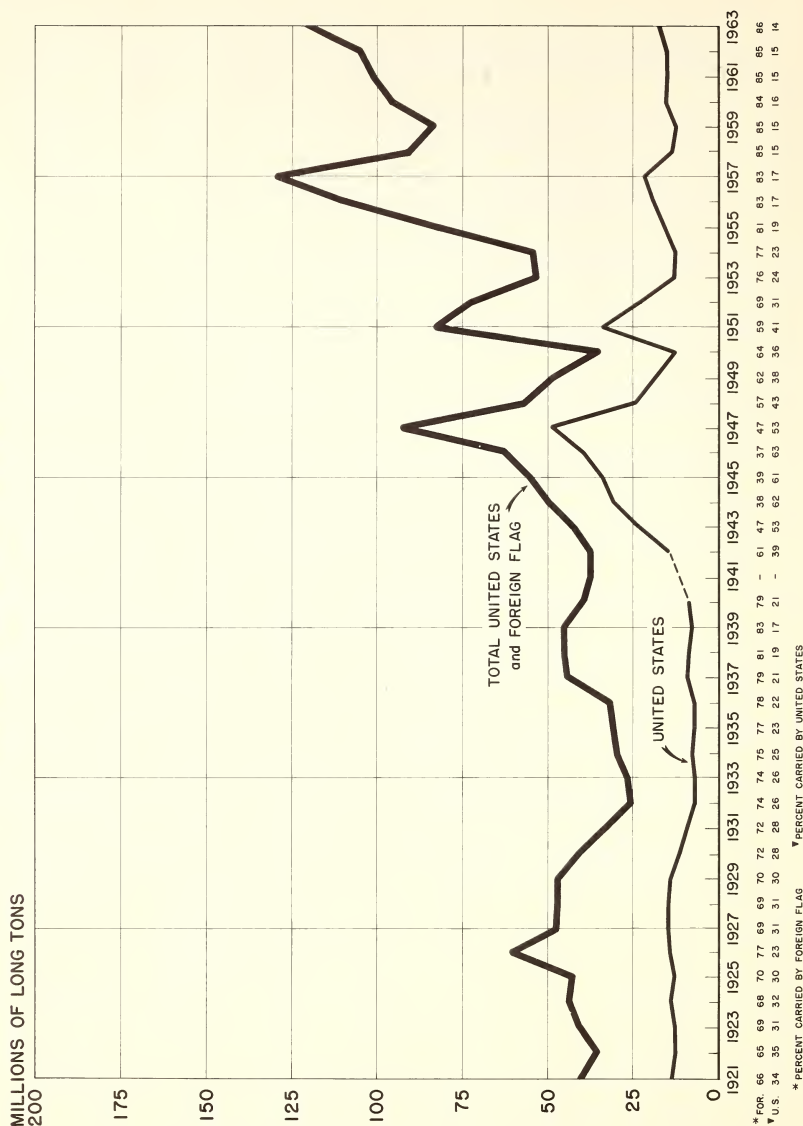
* U.S. 49 48 40 41 37 32 38 38 38 36 35 33 33 32 30 27 26 22 30 - 49 64 68 68 65 58 53 46 43 36 30 28 24 21 18 12 10 11 9 9 9

* PERCENT CARRIED BY FOREIGN FLAG * PERCENT CARRIED BY UNITED STATES

DEPARTMENT OF COMMERCE
MARITIME ADMINISTRATION

EXPORTS OF CARGO CARRIED BY DRY CARGO SHIPS AND TANKERS IN U. S. FOREIGN TRADE, 1921-1963

(Excludes Great Lakes, Cross Trades and Military Cargo)

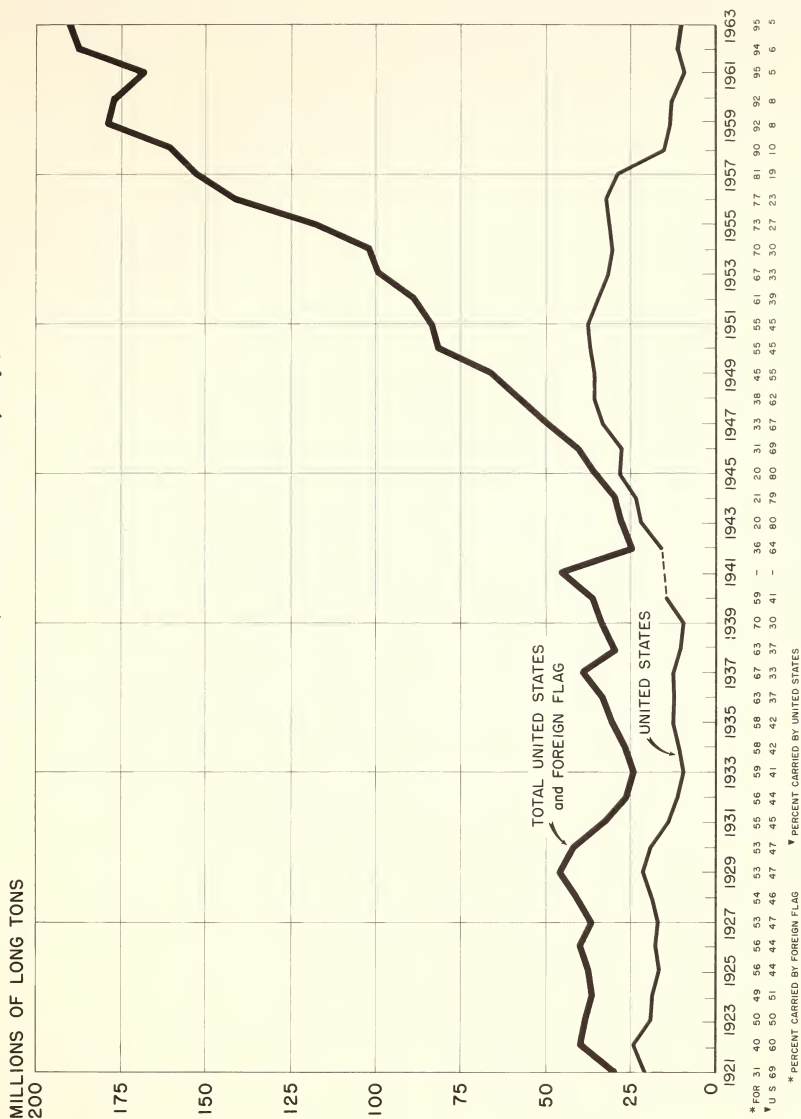


* PERCENT CARRIED BY FOREIGN FLAG

* PERCENT CARRIED BY UNITED STATES

IMPORTS OF CARGO CARRIED BY DRY CARGO SHIPS AND TANKERS IN U. S. FOREIGN TRADE, 1921-1963

(Excludes Great Lakes, Cross Trades and Military Cargo)



* FOR 31 40 50 56 56 53 54 53 53 55 56 59 58 58 63 67 63 70 59 - 36 20 21 20 31 33 38 45 55 61 67 70 73 77 81 90 92 95 94 95
 ▼ U S 69 60 50 51 44 44 46 47 45 44 41 42 42 37 33 37 30 41 - 64 80 79 80 69 67 62 55 45 39 33 30 27 23 19 10 8 6 5 5

* PERCENT CARRIED BY FOREIGN FLAG ▼ PERCENT CARRIED BY UNITED STATES

Movements of the Principal Bulk Commodities, 1955-63, and Projections Through 1975*

To an increasing extent the movement of bulk dry and liquid cargoes is becoming more important in the overseas commerce of the United States. This has been particularly so since the end of World War II, when the dynamics of political and economic forces created demands upon this country's resources for assistance to emerging nations, and to sustain established governments until their economies recovered and they could stand alone.

The millions of tons of grain, coal, phosphate rock, scrap iron and steel, mineral products and other commodities moving in bulk outbound to overseas areas continues. It moves whether as a Government sponsored cargo or as a purely commercial cargo for which payment in hard, freely transferable currencies is received. As the standard of living rises in the industrialized and economically mature countries of the world, more of our commodities will move to help them achieve their wants. For the foreseeable future it seems probable that the United States will continue to grant aid to those countries whose need for food and the means of improving their agricultural potential are of primary importance.

For example, in 1955, United States exports of seven principal bulk commodities totaled 51 million tons. In 1963, their tonnage amounted to 75

million tons and by 1975 it is estimated that their volumes will be about 124 million tons.

If the United States was generous in the assistance it gave others in the postwar period, it was also using up some of its natural resources at a very rapid rate while expanding enormously its commercial transactions at home and overseas. As a consequence, our imports of essential foods, mineral and petroleum products increased enormously. Bauxite, chromite, iron ore, manganese and sugar are among the largest imports on a tonnage basis that move in United States ocean-borne trade. In 1955, our imports of these commodities amounted to 36 million long tons. Eight years later the tonnage volume had increased to 51 million tons, and by 1975, it is estimated the requirements for these essential imports will rise to nearly 91 million tons. On the basis of past performance, it can be assumed that there will be sufficient shipping capacity of *all flags* available to carry not only these and similar commodities in United States trade, but in world trade as well. Except in war or periods of international crises, world shipping has always been available to meet transportation requirements for seaborne cargo movements. This has not been the case, however, as far as United States flag shipping is concerned or even shipping under the effective control of the United States. A study of the following charts indicates how small a volume of each commodity moved in United States flag ships.

*From a report prepared by Irwin M. Heine, Chief, Office of Statistics, and Joseph G. Nale-Povic, Assistant Chief, Division of Cargo Data, Office of Statistics, Maritime Administration.

Table 11.—Principal Bulk Commodity Exports in U.S. Ocean-borne Foreign Trade—Actual: 1955, 1960, 1963 and Projected: 1965 Through 1975

(In million of long tons)						
Commodity	1955 (tons)	1960 (tons)	1963 (tons)	1965 (tons)	1970 (tons)	1975 (tons)
Coal ¹	32.1	22.4	33.2	45.0	65.0	72.0
Corn ²	2.7	4.9	8.8	9.4	11.2	11.9
Cotton (unmfgd.) ³ ...	0.5	1.5	0.9	1.0	1.0	1.1
Grain sorghum ⁴	1.6	2.4	2.8	3.1	4.0	4.2
Scrap iron and steel ⁴	3.8	5.6	4.9	6.3	4.6	4.7
Small grains ²	1.9	2.5	1.4	1.7	1.2	1.2
Rye.....	0.1	0.1	0.3	0.2	0.2	0.2
Barley.....	1.5	1.9	1.0	1.4	0.9	0.9
Oats.....	0.3	0.5	0.1	0.1	0.1	0.1
Soybeans ⁵	1.5	3.3	3.9	5.0	6.8	8.5
Wheat and grain equivalent of flour ²	7.2	15.6	19.2	17.1	19.4	20.1
Total.....	51.3	58.2	75.1	88.6	113.2	123.7

¹Bureau of Mines, Department of Interior.

²Foreign Agricultural Service, Export Grain Division, Department of Agriculture.

³Economic Research Service, Department of Agriculture.

⁴Institute of Iron and Steel Scrap.

⁵Policy and Program Appraisal Division, Department of Agriculture.

Table 12.—Principal Bulk Commodity Imports in U.S. Ocean-borne Foreign Trade—Actual: 1955, 1960, 1963 and Projected: 1965 Through 1975

(In million of long tons)						
Commodity	1955 (tons)	1960 (tons)	1963 (tons)	1965 (tons)	1970 (tons)	1975 (tons)
Bauxite ¹	5.2	9.6	10.6	12.4	15.5	20.5
Chromite ¹	1.6	1.1	1.1	1.3	1.6	2.0
Iron ore ²	23.5	34.6	33.4	44.0	53.0	60.0
Manganese ¹	1.9	2.3	1.9	2.1	2.4	2.7
Petroleum products ²	68.6	99.7	116.6	122.0	138.5	155.1
Crude.....	43.9	57.3	63.6	66.2	76.1	87.0
All other.....	24.7	42.4	53.0	55.8	62.4	68.1
Sugar ³	3.5	4.2	4.0	4.2	5.0	5.5
Total.....	104.3	151.5	167.6	186.0	216.0	245.8

¹Bureau of Mines, Department of Interior.

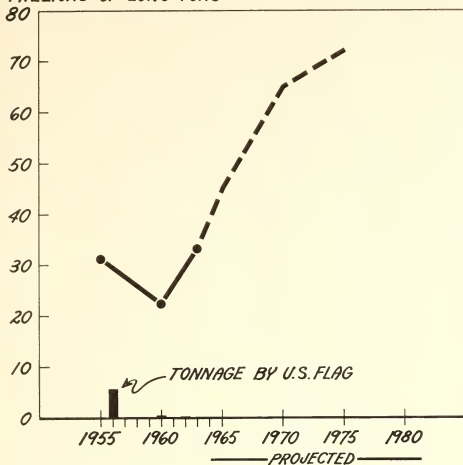
²Oil and Gas Office, Department of Interior.

³1955-60-63 data by Economic Research Service, Agriculture Stabilization and Conservation, Department of Agriculture. 1965-70-75 projections by Marad, Office of Statistics.

U. S. OCEANBORNE EXPORTS OF COAL

1955-1963 ACTUAL

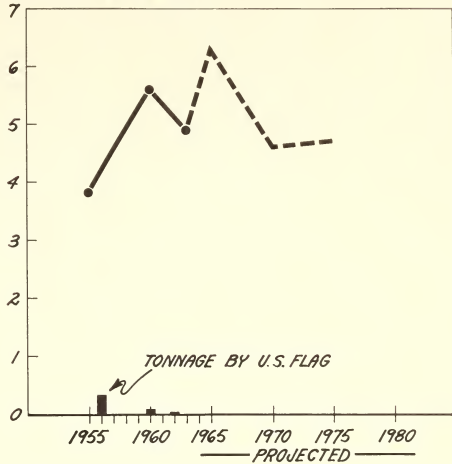
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF SCRAP IRON AND STEEL

1955-1963 ACTUAL

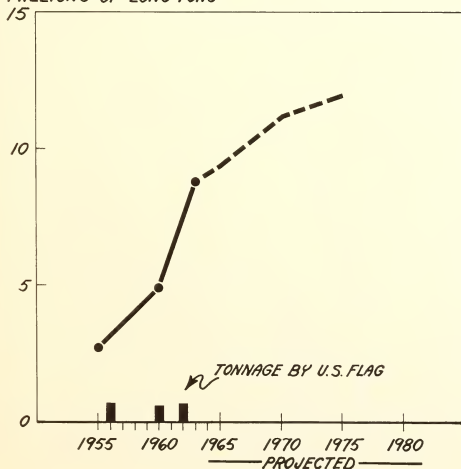
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF CORN

1955-1963 ACTUAL

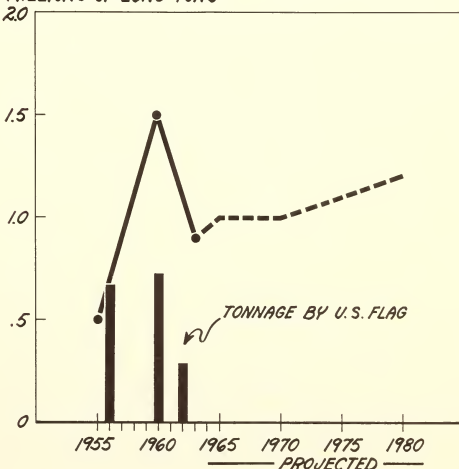
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF COTTON

1955-1963 ACTUAL

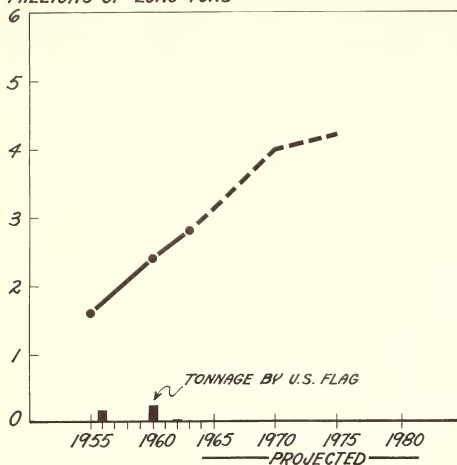
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF GRAIN SORGHUM

1955-1963 ACTUAL

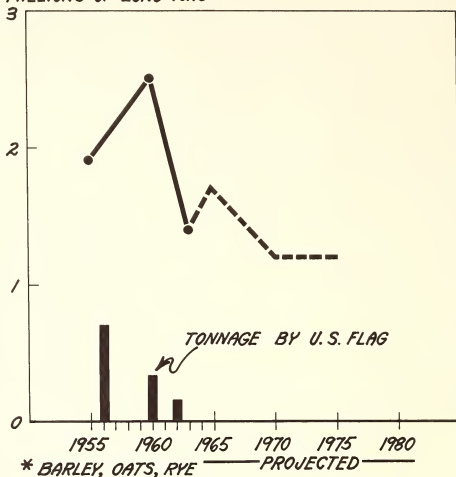
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF SMALL GRAINS*

1955-1963 ACTUAL

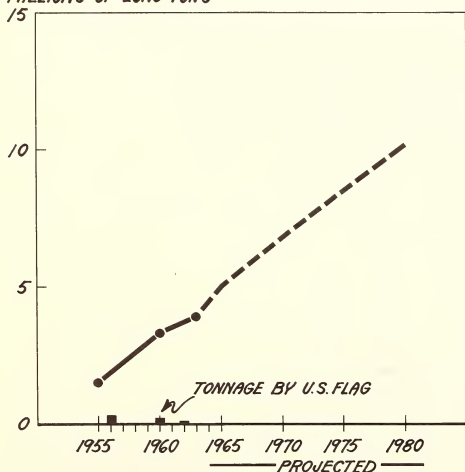
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF SOYBEANS

1955-1963 ACTUAL

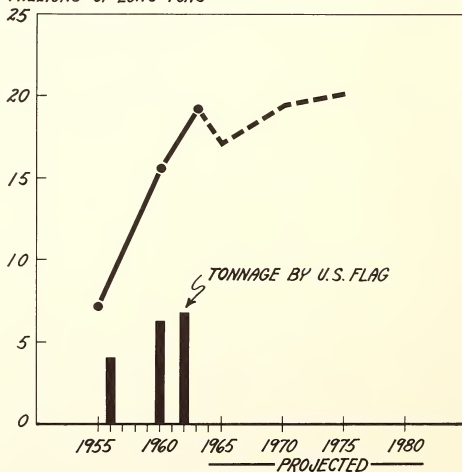
MILLIONS OF LONG TONS



U. S. OCEANBORNE EXPORTS OF WHEAT

1955-1963 ACTUAL

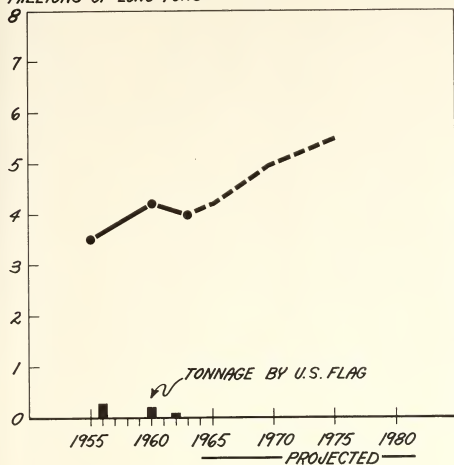
MILLIONS OF LONG TONS



U. S. OCEANBORNE IMPORTS OF SUGAR

1955-1963 ACTUAL

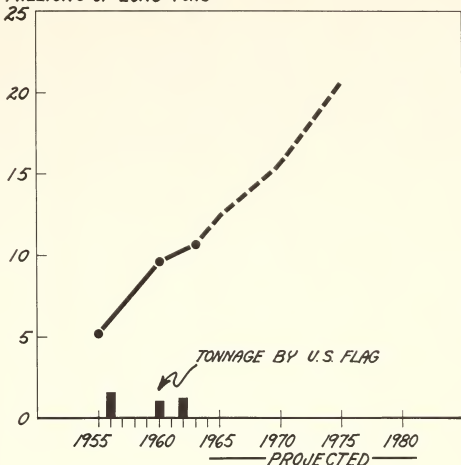
MILLIONS OF LONG TONS



U. S. OCEANBORNE IMPORTS OF BAUXITE

1955-1963 ACTUAL

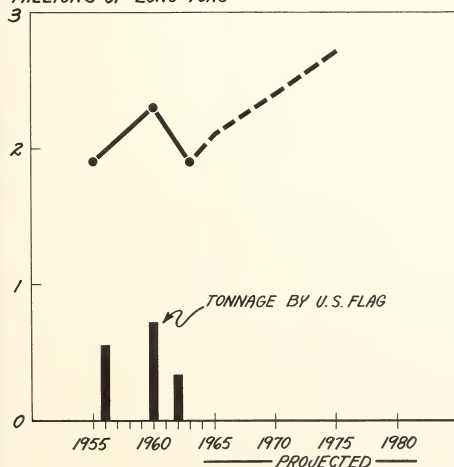
MILLIONS OF LONG TONS



U. S. OCEANBORNE IMPORTS OF MANGANESE

1955-1963 ACTUAL

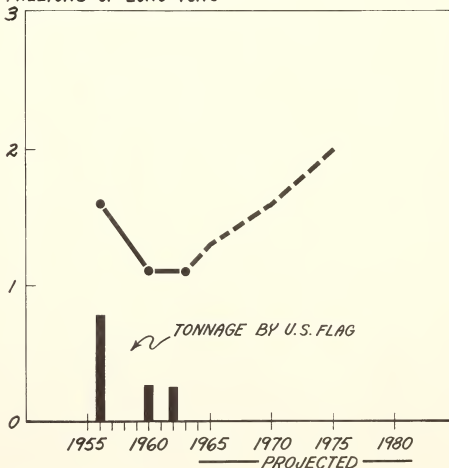
MILLIONS OF LONG TONS



U. S. OCEANBORNE IMPORTS OF CHROMITE

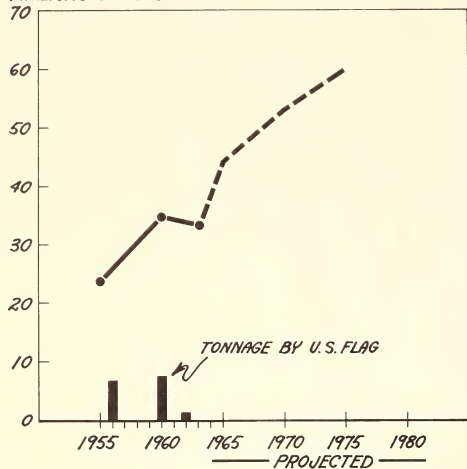
1955-1963 ACTUAL

MILLIONS OF LONG TONS



U.S. OCEANBORNE *IMPORTS OF IRON ORE 1955-1963 ACTUAL

MILLIONS OF LONG TONS
70



*Includes Great Lakes Shipments
from Canada

U.S. OCEANBORNE IMPORTS OF PETROLEUM PRODUCTS 1955-1963 ACTUAL

MILLIONS OF LONG TONS
200

